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MIND ALONE By J. T. M'INTOSH



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Cover by MEL HUNTER Showing DOME REPAIRS ON MARS

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CHANCE & MAPS

ON the wall of a tavern in midtown New York is a sign that advises customers: "In Case of Atomic Raid, Stand Near the Cuspidor—Nobody Has Hit It Yet!"

It's meant as a sarcastic gag, of course, but in it is the sort of cockeyed logic to be found in cloud chambers and history books. It's perfectly possible that somebody, beerily obeying the wry advice, may save his life while everybody around him is fried with mushroom explosions.

The number of disasters that humanity and individuals have stumbled into through blind, freak accident is appalling. Many of them are among the most important entries in the history of our race.

But . . . how many disasters have humanity and individuals avoided through other blind, freak accidents? The wars that might have happened and didn't; the inventions, like Hero's steam reaction engine, made prematurely, that could have wrecked civilizations unready for them, but, by pure great luck, were unrecognized for what they were; the missed trains and planes that crashed; the potential Napoleons thwarted because they came on-stage at the wrong moment . . .

It's an endless list and one that

fortunately can never be verified. Neither, of course, can the happenstances that cost us discoveries, masterpieces, the births or the lives of geniuses and good ordinary people — and eras of peace where there was none, but might have been.

During the early days of World War II, the government had to prohibit the sale of steel-clad Bibles, which, it was claimed, would turn aside bullets and fragments of shell. This hopeful business got its impetus from actual instances of soldiers being saved by plain clothbound Bibles carried in their pockets.

Those were real accidents, and they worked. But the contrived ones didn't. They turned non-lethal bullets into dumdums—which is why the sale had to be stopped.

I don't suggest that we rely on chance to the extent of providing the population with unhittable cuspidors instead of atomic shelters, or soldiers with clothbound Bibles solely to replace the very effective body armor developed for the Korean war, or that everything possible should not be done to avert fission warfare.

But neither should the role of the unexpected and unpredictable bit of freak luck be disregarded—especially by science

fiction writers. One dramatic example is the startling effect of Stalin's death.

I'd like to do an editorial soon on the influence of random factors on both events and individuals. If you have something to contribute to the relatively meager supply of data I have on hand, I'd be happy to see it.

AT the moment, though, I'm bemused by a book called *Maps and Map-Makers* by R. V. Tooley (Crown Publishers), partly because it's a lavishly lovely array of colorful ancient maps, but mostly because it details a talent that will have to be applied to other planets, when we reach them.

Studying these old maps, I'm struck more by their approximations to accuracy than what others might consider their quaint notions of geography.

There's an astonishing ability shown here, the ability to convert land and sea masses into bird's-eye views—with benefit of only the crudest instruments and vessels. It's the ability to visualize as if from the air or even space.

Since I don't have that talent for abstraction, it amazes me as much as levitation might. And yet, as Tooley remarks, "map-making is probably the oldest of the graphic arts, for it is common to all primitive peoples. For ex-

ample, the Eskimos have constructed maps of their own coasts but little inferior to Admiralty charts. Marshall islanders preserve a knowledge of their own localities by a sequence of palm leaves and sea shells; a native of Tahiti drew a map of an area nearly 3,000 miles in length for Captain Cook . . .

"Cortes traveled 1,000 miles through Central America guided only by a calico map provided by a local cacique."

There are strange national variations in the making of maps, and even more so from period to period, that one doesn't usually associate with anything so factual. Italian cartography was severe; French, light and almost witty; Dutch, meticulous and comfortable; and the bounciness of the Elizabethan era is a remarkable contrast to the solidity of prosperous Victorianism.

Of course, when we reach new planets, we'll have an advantage that the ancients lacked—actually being able to map from outer space all the way down to low-level aerial photography and on-the-spot surveying.

But even if a world is cut off and reverts to barbarism, the ability to make maps won't be lost. In fact, judging by past history, it probably would be one of the first to be reborn.

—H. L. GOLD

MIND ALONE



By J. T. M'INTOSH

*There was no reason for the revolt of
the Murrane colonists against Earth . . .
but they had every reason to hide the fact!*

Illustrated by VIDMER

I.

IF she had been a man, they would have saved themselves a lot of trouble and killed her. Yet they had quite a few reasons for doing what they did.

First, the knowledge she had must be destroyed one way or another—there was no question of that. They couldn't afford to keep her prisoner anywhere on Murrane, so it was either death or this. Another reason was that they had a new technique and this was a chance to try it out. Another was that they liked the idea of being able to let her go, even return her to her own world, and nevertheless know that she was no danger to them.

Another, perhaps, was that should it ever become necessary, they could reveal that they hadn't killed her after all.

But behind all this was the fact that they were Murriners. Women, on the frontiers of galactic exploration, were almost sacred. The whole attitude toward women was different from that on an overcrowded world with as many women as men. All this was irrelevant in this particular case; but, being Murriners, they still didn't want to kill a woman.

"You can't hide this," she told them vehemently. "Every human being, on Earth or Murrane or anywhere else, is bound to know the truth anyway in a few years. You should be trying to heal the differences between Earth and Murrane, not carry on this insane war!"

"That's a point of view," one of the Murriners admitted. "Another is that we've a much better chance of getting what we want, on our own terms, if Earth doesn't have the faintest idea what our motivation is."

"But your own people think—"

"When did any people," the Murriner said gently, "ever know truly, exactly, why they were fighting a war?"

SO THEY systematically destroyed her knowledge. The first thing to go, of course, was

that little piece of knowledge—the true motive for the war. But they didn't stop there. Only one thing, at this point, was missing out of a well-ordered, well-stocked brain, and she would therefore soon get it back by calculation, observation or guess. So the next thing to go was her entire personal experience. All her memories of every event in her life were cleared away like so much rubble. She didn't know who she was or anything she had ever done.

But she still knew language and how to read and write and walk and talk and think. She could still be identified in five minutes by these things. So they had to go, too.

All that she had learned in years of life and study was removed in a few hours. But there was a difference between what was done to her personal memories and what was done to her general knowledge, including language. The memories were erased completely; the knowledge was merely blotted out. Thus when they came to teach her English again, she learned very quickly but talked quite differently. They taught her to write again, and as if to help them she automatically wrote with her left hand though she had always written with her right. Her writing was complete-

ly different, of course.

"Where am I? Who am I?" she asked often.

At first, when she knew only a few words, they didn't answer. But when they saw she could understand, they told her, to quieten her, that she was Muriel Martin.

She repeated the name hesitantly: "Muriel Martin. Mur-iel Mar-tin. Martin. Muriel—" and then burst out suddenly: "But that's not my name!"

"All right," she was told. "Call yourself anything you like. Do you know any other name?"

She was silent. She didn't. They hadn't told her any other names.

After that, they changed her physically. First they altered her metabolism. It was a tiny change, but her rather dark skin became much lighter, she ate less, she began to like foods she had disliked and lose her taste for others, and she became more deliberate in her movements, far less restless. An inch came off her hip measurement and two inches off her chest. Other changes were made merely for the sake of change. But since the people who worked on her were artists in their way, since they had to change in any case, since they were experimenting—they improved. They straightened the bones of her legs, corrected her

stance and toughened the muscles of her neck and shoulders, so that she stood an inch and a half taller. It was enough. Big changes were completely unnecessary.

THE process, however, wasn't done with kindness, consideration and loving care. Since there had to be pain, they used it for conditioning. To make sure the conditioning was effective, they did nothing about quite a lot of pain that could have been avoided.

She was conditioned against taking any interest in the Earth-Murrane war, on one side or the other. Most particularly she was conditioned against ever coming back to Murrane. The latter was selective, since they had so much effective pain to play about with—they could afford to condition her to mild respect for Murrane, and strongly against ever coming back to it. There was enough stimulus available to hammer home even a complicated lesson.

After all this, they removed the personal memories she had begun to build up again since the last rape of her mind, and left everything else alone. They tested her, and were pleased. Inside two weeks—it had had to be inside two weeks—they had destroyed one woman and put another, quite different, in her place. She would never remember

her previous history, for it wasn't there to be remembered.

When the job was finished, they dragged her to insensibility and took her to a small ship, a two-man vessel that could not only make the journey from Murrane to the Solar System, but could land almost anywhere in reasonable safety, being so small and so obviously harmless.

The pilot of the ship, who would have to fly it without assistance farther than any such ship had ever been flown before, frowned and asked who the girl was to merit such consideration.

It would be better for him not to know now, he was told. But he could ask when he came back, if he wished.

He never came back. His ship, tiny as it was, was spotted by the Terran fleet out beyond Pluto and destroyed when it tried to run. It was ironic, for he wasn't entering the Solar System, but leaving it, having done his job. He was doing no harm.

But in war an enemy is an enemy, whether he's doing any harm or not.

II

THOUGH there must have been days when she was near the threshold of awareness, it was on a definite day, almost at a definite second, that she was fully

conscious and aware of being conscious.

She looked around her, but that was unnecessary. Before full consciousness there had been perception, and she knew her surroundings.

She was sitting in a garden—a warm, healthy, luxurious garden, obviously on Venus. She felt light, but on Mars she would be lighter still. Here she could hold out her arm straight from the shoulder and keep it there for half an hour without discomfort. It was breathing that was most different. On Earth, one was seldom completely unaware of it. It was a mild labor to breathe, raising chest and shoulders, expanding ribs. Here the air seemed to flow in and out of its own volition. There was no tendency to droop when exhaling. The chest didn't fall, it merely grew a little smaller. One didn't have to breathe fast and shallowly, as on Mars.

On Mars, too, it would be very much colder. She was wearing white shorts and blouse, nothing else. She wasn't heavy enough to have to wear shoes to protect her feet. And on Venus—a point of interest to most women who went there—it was usually quite unnecessary to wear a brassiere or a girdle. Even flabby pectoral and abdominal muscles could hold flesh firm against the mild gravi-

tational pull of Venus, three-twentieths less than that of Earth.

Yes, she was on Venus, without a doubt. A hundred other things confirmed it—the low, heavy clouds, the heat, the perfectly diffused sunlight that made shadows almost non-existent, the lushness of the grass, the haze over the forests, the smell of the air...

All of which showed that she knew Venus, Earth and Mars, at least.

SHE was alone. But when she turned her head, she saw a white building through the trees. In the other direction, down the hill, she knew there was a tall wire fence. This, then, pleasant though it might be, was a prison of some kind. She fingered her blouse thoughtfully. Though clean and fine, it was very plain, a common pattern, the kind of garment that wouldn't generally be worn from choice.

She wasn't disturbed. She knew she was called Muriel Martin, and was pretty sure that wasn't her real name—but whoever she was, wherever she was, however she had got there, she was quite confident of her ability to handle the situation.

Trying to look into the past, even the recent past, was unpleasant. She gave up the effort as far as the distant past was concerned. There was nothing there, and

a curious finality about the nothing. But she explored the recent past conscientiously, ignoring the disinclination to do so.

There were shadow-memories of testing and probing, people trying to make her do things she couldn't do. There was also the hurt of being treated as little better than an animal because she was little better than an animal, yet knowing that she was very nearly a sane, intelligent human being. But there was no maliciousness in that; the people were really trying to help her.

There was one spot of maliciousness, however. Something concerning a Security officer. He had been vile. She didn't remember much about what had happened, but he had been thoroughly unpleasant, tearing with his questions and suspicion and anger and disbelief at the brain that was trying to heal. She classed him, on the little she could recall, as a petty, frustrated official, the kind of man who must always be a failure in handling people but who so often is permitted to try.

Before that there was—horror. She knew nothing about it and didn't want to. Though she probed for it grimly, she was rather glad when she was forced to the realization that it was quite unavailable to her.

She rose lightly. The apparent loss of even a small fraction of

weight makes anyone feel an athlete. An athlete feels like jumping over trees. She ran, not because she was in any hurry, but because she felt like running.

She stopped when she saw another girl, also alone and also wearing the same kind of blouse and shorts. This girl was pretty but there was something missing in her face. Muriel saw that even before she spoke.

Two minutes later Muriel turned away. The girl was only dimly aware that someone was talking to her. She made sounds in reply, agreeably, and there was clearly no harm in her. But her I.Q. couldn't be more than 60 and was probably much less.

In half an hour, Muriel had spoken to a dozen or so women in the grounds—and that was enough to show her that she was in some kind of home for sub-normals.

Her confidence subsided a little. People didn't get into places like this without good reason. That blank spot of horror in the past—was it really horrible, or was it something a sane mind should have taken in its stride? Had it just been something she couldn't take, something she had scuttled from in fear instead of facing boldly? She was sane now, she believed—but perhaps that was something that didn't happen often. Perhaps she had

brainstorms. Perhaps . . .

She put aside the anxious, frightened thoughts that rushed into her mind. If she wasn't often sane, the sooner she made good use of this lucid spell the better.

Anyway, the other women she had seen didn't seem to be insane. There might be psychotics here, too—but for the most part they had seemed merely sub-normal.

She walked up to the house. Before crossing the hall, she took a pair of sandals from a cupboard just inside the door and put them on. That was automatic. She wondered how often she had been here . . . how often she had done that without really knowing what she was doing.

She hesitated before tapping on a door at the end of a white corridor. She had a clear enough picture of the man inside, though she didn't remember his name. She had no fear of him, certainly; he was old and kind, though sometimes rather fierce. What caused her hesitation was the sudden realization that she didn't know what she herself looked like . . . whether she was young or old . . .

Resolutely, she tapped at the door and went in.

THE man was as she remembered him, and she knew at once she could trust him. He

wore an ordinary lounge suit, which made him almost ludicrously overdressed on Venus. But a lot of older people dressed like that. It wasn't that they objected to scanty apparel, but only that they felt they couldn't behave with any authority if they were half naked.

"Hallo, Muriel," he said pleasantly. "Sit down." His eyes were keen, she saw, not missing much.

"I think you asked me questions before, doctor," she said briskly, "and couldn't get much out of me. Would you like to try again?"

The expression on his face became almost delighted. His eagerness, Muriel guessed, was the natural sympathy and interest of anyone who worked among handicapped people, the joy in any sign of improvement.

"You've recovered your memory?" he asked.

"No, I'm afraid not. I still don't know a thing about myself. Not even how old I am or how I look."

The doctor showed no sign of disappointment. "Perhaps we should deal with that first," he said. "You want to know how you look?"

"Well, I'm naturally interested." She smiled. "Ever meet a woman who was more or less sane and didn't know whether she was tall or short, young or

old, pretty or ugly?"

"Before you look at yourself," said the doctor, "do you think it's all right to do it? I mean, you haven't any fear of looking in a mirror?"

"No. Only an in—" She stumbled.

"What's the trouble?" asked the doctor sympathetically. She remembered now that his name was Johnston.

"Just words. I was going to say only a something curiosity, but I don't know the word. It means very strong."

"Intense?"

"That's it. Intense curiosity." She tried the words over once or twice, and found they came easily.

The doctor rose from behind his desk and opened a cupboard. "There's a full-length mirror inside the door."

Muriel got up and stood in front of the mirror. She had braced herself mentally, for she hoped she was young but knew she might have to bear the disappointment of seeing she was old. She wanted to be pretty, but the chance of that seemed small—she had some shadowy awareness that she wasn't pretty.

What she saw wasn't anything like what she had expected.

She was young, clearly—not more than twenty-five at the most. And she was beautiful,

astonishingly beautiful . . . but even that consideration was swept away for the moment by something she wouldn't have believed possible, even granting her almost complete loss of memory.

The girl facing her in the mirror was a complete stranger. She had never seen her before in her life.

PRESENTLY, Muriel was doing an intelligence test. She had told Dr. Johnston, unprompted, that she thought she could do a non-verbal test adequately, but as yet a verbal test would give a misleading result. He said nothing, merely gave her a book and a pencil.

He watched her as she worked; it didn't seem to bother her at all. He noticed that she tried the pencil in one hand, then the other, before beginning to write with her left, at first awkwardly, and then with more precision. He hadn't suggested that she should work at the desk, waiting to see what she would do. She'd crossed her legs and worked quite confidently with the book on her knee. Stenographer? he wondered.

She was apparently completely sane, but the type of amnesia was puzzling. It was oddly selective. It was curious that she should remember nothing whatever of her own life and yet have almost free access to the normal

general knowledge and vocabulary of an educated person. He knew he wasn't handling her as the textbooks said such a case should be handled, but he felt certain without working it out that it was much better to give her mind a lot to do than too little. She hardly needed directions on how to do the intelligence test. She saw the form of it and became absorbed in it.

Muriel finished the test and handed it back to him. He put it aside.

"Aren't you going to check it and tell me how I've done?" she asked.

"It isn't normally done."

"I know. But it would help me, I think. I don't know whether I'm above or below average. It will help me plan my life, when I'm ready to plan. I'd like to know what that shows, please."

HER confidence impressed him. From the moment she'd entered the room she had been completely at home, unperturbed by the situation.

He checked the test and referred to a list.

"This gives you an I.Q. of 130 plus," he told her.

"What does that mean?"

"That you're in the top two per cent of the population in intelligence. It doesn't show any more than that. The standard devia-

tion in this test is fifteen . . . do you know what I'm talking about?"

"I think so. You mean fifteen points are arranged to cover about a third of all people. A third between 85 and 100, and another third between 100 and 115. And I'm 130."

"You're 130 plus. Anything over 130. That is, the test takes no responsibility for you. It's meant to grade normal and sub-normal people to a certain extent that shouldn't be overestimated."

"Not absolute but—?"

"Empirical. Statistical."

"I see. What's the next move?"

Unexpectedly his face grew hard, even angry. But she knew the anger wasn't against her.

"Security," he said. "They've insisted on seeing you again, as soon as possible. I'm afraid it's possible now. I'm sorry, Miss Martin. Do you remember anything about the last time a Security officer saw you?"

"Yes, a little—and I don't like what I remember. What is this Security? Why do they insist on seeing me?"

"They think you might be a Murriner spy," said the doctor derisively.

"Murrane," the girl mused. "I've never been there and I don't want to go there. I'm not interested in the war."

"You know about the war?"

asked the doctor quickly.

"Only that there is one. Oh, well . . . if I have to see this man, doctor, it might as well be now."

Dr. Johnston stared at her for a few moments, then nodded. He picked up the phone on his desk.

III

NURSE BRAYNE was a chatterbox. The words poured out of her in a sort of verbal *perpetuum mobile*, a pleasant sound if one didn't pay too much attention to what she was saying.

"Yes, you're my size, as near as makes no difference," she said, surveying Muriel. "We'd better hurry, Miss Martin—shall I call you Muriel? Security said someone would be along about four, but it would be just like Security to say that and make it two hours earlier, to catch you on the hop. That's the way they work. Of course, it's all necessary and no doubt they do a valuable job, but sometimes one wonders why they have to be so tough about it. I'm so glad you're all right now—I always thought there was something different about you, you always looked so clever, even when you were . . . but that's all over, and I'm sure you'll be able to stand up to this officer and let him see he can't push you around—he can't really, you know, if you only remember you've noth-

ing to be afraid of. They're hard and suspicious, and they work on people by making them nervous and jumpy, and if you refuse to be nervous they have to climb down and be civil. Dr. Johnston says it's a crime that they should be allowed to come here and—"

On it went, with Muriel half listening, because she knew so little that she could learn even from Nurse Brayne.

It was still only two hours since she had come to full consciousness in the garden. She knew now that six weeks ago she had wandered into a village fifty miles away, Norburn, dirty and disheveled and completely dazed. There had been a search for a crashed ship or plane in the vicinity, but nothing was found. At first it had been thought that she was suffering from ordinary shock, but it soon appeared to be more than that. She had been taken to the nursing home, not because that seemed the right permanent place for her, but because she had to be sent somewhere where she could be looked after.

"Dr. Johnston's quite right," said Nurse Brayne. "You'll feel so much more confident if you know you're looking your best."

"Will I?" asked Muriel. "I don't think it would make any difference to me, Helen."

"Don't you care about clothes?"

"No."

That almost made Nurse Brayne speechless for a while.

IT had been Dr. Johnston's idea to freshen Muriel up before the Security Officer came, and in one respect, Muriel agreed, it was a good idea. People did judge you by your appearance. If you were well-groomed and immaculately dressed, people were a little more cautious with you, afraid of what you might think, feeling themselves at a disadvantage. But in the end, your manner mattered more.

Anyway, Helen Brayne had volunteered to take her away and make her more presentable. Muriel had showered and was now in the nurse's bedroom, waiting patiently for Nurse Brayne to decide what she should wear.

"Are you a max or a min?" the nurse asked.

"I'm afraid I don't follow that," said Muriel. "I can guess you mean maximum or minimum, but that doesn't help."

"You must have known, but forgotten," said Helen. "Everybody's a max or a min. You wear as much as you can for any occasion, or as little."

Muriel smiled. "No, that's new to me . . . but surely people are sometimes one thing, sometimes the other?"

"It's all right if you've got natural taste," said Helen cheerfully. "But how many girls have? If they follow a pattern—max-min, bright-somber, plain-frilly, and so on—they can be sure that they're dressed more or less right most of the time. It's quite sensible, really. If you're overdressed for a ball and underdressed for a garden party, you're not giving your personality a chance. Are you sure you never heard of max-min? You seem to know most things, and this has been going on for five years now."

Muriel found that interesting. "On Venus and Earth, you mean?"

"And Mars."

"Suppose I haven't been on Venus or Earth or Mars in the last five years?"

Helen ceased abruptly to be the gay chatterbox and became the surprisingly efficient nurse. "I see what you mean. Or you could have lost your memory five years ago. But if you weren't here, you must have been on Murrane."

"Murrane? I've never been there. Isn't there anywhere else I could have been?"

"Not that I know of, unless you're an explorer. Well, what are you—max or min?"

"Max, I guess."

Helen looked surprised. "Oh, well, if you say so. People who

look like you generally prove it, if you know what I mean. Say, Muriel—" she was serious again—"don't give the Security man any idea that you've been out of this System in the last five years. They're suspicious by vocation."

She turned back to the drawer whose contents she was investigating.

Muriel reflected that perhaps the Security men had to be hard and tough and suspicious, to counteract the openness and friendliness of people like Dr. Johnston and Nurse Brayne, who seemed to take it for granted that she couldn't possibly be a spy or saboteur or anything of the sort.

It was more than Muriel took for granted herself.

NURSE BRAYNE had been quite right. While she was brushing Muriel's hair, over two hours before the Security Officer was due, there came an imperious summons relayed by a rather scared nurse. Captain Clark was in Dr. Johnston's room and wanted to see Muriel Martin immediately.

Dr. Johnston met her in the hall and, probably against all the rules, told her fiercely that if that tough jumped-up cop said anything she didn't like, she could press the bell under the desk and he'd come running in to take him apart.

"Thanks, doctor," said Muriel warmly. "But I don't think it'll be necessary, now."

She had remembered a little more of the last occasion when a Security Officer had come to see her. She'd been able to say only a few words at the time, and couldn't understand what was going on. But she had felt the truculence of the man, his suspicion, his anger; his emotion had been like a physical attack on her. When he touched her roughly, though he hadn't really done anything much, she had felt terrified and utterly helpless. He had tried to force the truth out of her, when the only possible way to get anything out of her at all, as Dr. Johnston must have told him, was to draw it out with infinite gentleness and patience.

Muriel opened the door of the doctor's room and went inside. It was very different from the last time she had entered it, only a short time ago. The man behind the desk this time was younger than she expected, not as hard looking as she expected, but quite as grim and humorless. He wore some kind of uniform, blue and spruce. He looked up from some papers he held as she came in.

Muriel was glad, after all, that she was neatly and attractively dressed. For just a fraction of a second, Captain Clark's eyes widened and flickered over her,

and she knew that he was human. It was worth it for that.

Then he was himself again. "Please disabuse your mind," he said coldly, "of anything you've heard about Security in this somewhat uncooperative establishment."

That was nasty. In typical Security fashion, even with a girl in a nursing home, he was starting off by trying to cow her, to undermine her confidence in herself.

"It's all right," said Muriel easily. "I'm disabused."

"I didn't say you could sit down," said Clark sharply, as she moved toward the other chair.

SHE sat down. "Captain Clark," she said, "I started off with the fixed determination of cooperating with you all I possibly could. Are you going to insist on making it hard for me to do that?"

"Yes," he said.

"Why?"

"I'm asking the questions."

"You haven't asked any yet."

"Why are you determined to cooperate? Because you have something to hide?"

Muriel laughed. "Could be. I'm hiding it very successfully from myself, and I could do with your help, or anyone else's to find out what it is."

"Do you realize I have the power of life and death over you?"

"No. I don't think you have."

"I give you my solemn word that if I thought you were a Murriner and had any chance of escaping, I'd shoot you here and now."

"Oh, no doubt. But that's hardly relevant, is it?"

She had realized some time ago that he was acting a part. The other Security Officer, whom she dimly remembered, had been either a different type of man or a much better actor—but the goal was the same. They both tried to push her, to annoy her, to frighten her. Only the first officer had succeeded. The second wasn't going to.

"How do you feel about the Earth-Murrane war?"

"I don't give a damn about the war."

"Why is that?" Clark rapped. "We're fighting for our System, our very lives, and you don't care?"

"No, I'm afraid not. Maybe I've had nothing to do with the war."

"Don't try to explain it. I can see what your answers mean. Do you think we should just surrender to the Murriners?"

"I don't know about that. Remember, I've only just waked up. What are you trying to do, put

me back to sleep again?"

"Ah," said Clark softly, "I've touched a tender spot, have I?"

"No. That was an honest request for information."

Clark came out from behind the desk. "Sit closer to the desk," he said, standing over her.

"What for?" demanded Muriel warily.

"Sit closer!" he shouted.

SHE pulled her chair closer to the desk. She had an idea, by this time, that nothing very serious was going to happen. He took a small plastic case from his pocket, placed it on the desk in front of her and opened it. Inside was a morse key, a small light and a buzzer.

"Hold that key down," he said. "When the light goes on and the buzzer sounds, let the key up as quickly as you can. Got that?"

"Yes." Muriel searched her mind for the term 'reaction time', but though the idea was perfectly clear, she couldn't quite find the words.

Twenty times the buzzer sounded and the light flashed. Then Clark opened the back of the little case and took out a card.

"Point three six, point two nine, two seven, three two, three one—" he read.

"I don't believe you," said Muriel.

He grunted, but didn't let her see the card. He was a very bad actor, Muriel thought. It was quite obvious that he was no longer in the least suspicious of her, though he kept up the pretense of brusqueness. He was really rather nice, she thought, sensing the good nature behind his formidable front.

She found the term she was looking for. "Murriners have slower reaction times than we do, then?" she asked, interested.

"You didn't know that?"

"I believe I did. Is the hold-up at the synapses?"

He tried to snap back at her, but couldn't. "No, the transmission through the nerve fiber is slower."

"Of course. Range of about four to sixty meters a second, instead of five to a hundred—funny how I can remember figures. But that couldn't always be a conclusive test, then."

Clark simulated biting sarcasm. "Maybe you could find a better one?"

"I'm sure I could. A blood test, perhaps. Isn't there something in Murrane's air, soluble in the blood, that affects the endocrine glands—modifying the chemical reactions, changing some of the enzymes . . ."

"Sure," said Clark. "Only I can't carry around a laboratory I can carry this. Say, aren't you

supposed to have lost your memory?" he added, forgetting to be tough.

"I was surprised I remembered that," said Muriel, pleased. "Tell you what, let me test my own blood and I'll tell you whether I'm a Murriner or not."

It was too much for Captain Peter Clark. He stared at her for a moment, then laughed.

"All right," he said. "You win. Can I call you Muriel?"

IV

WHEN Captain Peter Clark left the Veborn nursing home, he should have been beginning to forget that Muriel Martin even existed. His job in Security was counter-espionage, nothing else. Having satisfied himself that Muriel wasn't a Murriner, he had done his job, and as far as he was concerned she should have ceased to exist.

But back on Murrane no allowance had been made for the fact that Peter Clark was younger than most Security Officers and had always liked intelligent brunettes who didn't lose their tempers. Murriners, naturally, had a different view of Security Officers, and certainly didn't regard them as human beings.

So instead of starting to forget Muriel, Clark was running over possible excuses to pursue the

matter, and Muriel.

At the nursing home, Muriel was assuring Dr. Johnston and Nurse Brayne that Security Officers weren't as bad as they thought.

"He explained himself afterwards," she said. "I suppose I shouldn't pass it on to you, but I don't think it will do any harm. Murriners feel inferior—they can't help it. They deny it, of course, even boast that a Murriner is better than a Terran any day, but it's there. They're angry-defensive. And the best way to discover them is to be angry-offensive. I saw Clark was only trying to annoy me, and that what was said didn't really matter. So he didn't annoy me at all."

Dr. Johnston had been looking at her closely as she spoke. "You're quite normal, Miss Martin," he said. "In fact, I rarely met anyone saner. You're almost aggressively sane."

Muriel laughed. "Yes. But tell me—what can I do now?"

"You can walk out of here any time you like, now that you've been passed by Security. But that doesn't help you much, since you haven't any job or relatives or money. I suggest that you work in the office here. It won't pay much, but at least you'll be independent and we'll be able to help you to get your bearings."

"Thanks, doctor," said Muriel warmly. "I'll do that for a while anyway. Am I really free?"

"Of course. It isn't a crime to have lost your memory. You were never certified, and this isn't an asylum."

Impulsively Nurse Brayne, an affectionate creature, put her arm around Muriel's shoulders. "We'll try to make you happy," she said.

THREE days later Muriel had taken over the running of the office. No one there had any organizing ability, and everyone was glad to pass the reins over to her.

She didn't believe, however, that she had ever worked in an office before. She found she was much more at home in the pharmacy. Gradually things were being confirmed or denied. She was a chemist of sorts, but not a doctor. Yet a lot of biology was familiar to her, and when she discovered anthropology the subject was clearly not new to her. In mechanics she was completely blank; dynamics meant nothing to her. In fact, there were subjects on the technological side that she didn't even seem to have heard of. Chemistry was the best bet. She regained whole chunks of knowledge merely by picking up bottles and looking at the labels.

She was learning all the time, and enjoying the process. Often she would merely look at the name of a substance, and into her mind would come a picture of it and all the things it would do.

On the fourth day she had a visitor.

"Not Captain Clark," he protested. "Call me Peter. Can you take the afternoon off?"

"Easily," she said, "if I'm shown a good reason."

He frowned. "I don't know whether it's good or not," he admitted, "but I've been thinking it up ever since I saw you last."

She laughed, and gave herself the afternoon off.

THEY didn't have to stay in the grounds, but they didn't go far from them. One couldn't sit anywhere on Venus without being soaked, but Peter was prepared. He spread a thin plastic groundsheet on the steaming grass. Muriel sat at one corner of it and motioned him to stay on the other.

"Not too close," she told him. "I may be married, you know, and I'd better stay faithful just in case."

Peter's eyes widened. "I never thought of that," he said. "Let's see your left hand . . . look, you never wore a ring!"

"Doesn't prove anything," she smiled. "Now, what about this

reason you were going to show me?"

Peter became more serious. "Frankly, at first I was only looking for an excuse to see you again," he admitted. "And if I hadn't found one, I'd have come anyway. But I did find one, I think. What does your history, as far as you know it, suggest to you about how you lost your memory? Anything?"

She shook her head. "Does it suggest something to you?"

"Yes. You didn't lose your memory. You had it lost for you."

He put it bluntly, and Muriel not only understood at once, but also agreed with it.

"But how could that happen?" she asked. "You mean someone hit me over the head, or something?"

"No—not that kind of thing at all. If someone loses her memory by what you might call natural means, she's not normal and confident but without her personal history, like you. She's dazed and lost and doubtful, and she has quite a lot of her personal history, if she remembers as much as you do. Loss of identity is common, but—"

"I see what you mean," said Muriel slowly. "People wouldn't have language and knowledge—but not a single recollection of anything that ever happened to

them. I don't remember any person I ever knew, or going to school, or what I used to look like—"

HE was on that like a flash. For an hour or so, they carefully examined what she knew and what she didn't. Nothing very much emerged from it, but Peter's idea got some support. It was as if everything she had ever learned had been put either into a personal or a general memory bank, and then the personal bank had been taken away.

"Which doesn't happen by accident," he said. "Muriel, there's one psychiatrist on Venus who might be able to find out something more about this. Will you go and see him?"

"Of course. Who is he?"

"Dr. Waterson, at Pinylake. I can fly you there any day you like."

They settled the details of that, and Peter heaved a sigh of relief. "That was all very well," he said, "but I came out with a girl, not a psychiatric case. Can I move a little closer, please?"

"How about my not-out-of-the-question husband?"

"You don't remember any husband, do you? Well, you haven't got one." He moved closer.

"Quite a lot of people would refuse to believe this of a Security Officer," Muriel observed

brightly. "Aren't they all hard and tough and unsympathetic?"

"That's just a myth. Just give me a chance and I'll prove it." He moved closer still.

"Suppose I were to turn out to be a Murriner spy?"

"That's the core of the whole thing," said Peter with satisfaction. "This is bare-faced blackmail. If you don't let me kiss you, I'll tell Security you're a Murriner after all, and they'll take you out and shoot you. See?"

"I don't want to be shot," Muriel admitted. He took her in his arms and kissed her very thoroughly.

DR. WATERSON was one of the new electronic psychiatrists. He seemed to have grown a little electronic himself; he hummed like an electric motor as he worked, his little black eyes glittered like nuclei, and his black hair perpetually stood on end as if charged with electricity.

He ignored Muriel and Peter completely as he gathered data from his various machines. Though he used a lot of apparatus, his work was by no means all electronic. The word in any case was a misnomer; it had been applied to men like Dr. Waterson through wholesale confusion of psychiatry and cybernetics, encephalographs and electronic brains, electricity and electronics,

and had been so generally used that it had stuck. Now Waterson himself called his profession electronic psychiatry—an example of the power of the uninformed layman.

Dr. Waterson's work wasn't all electric, then—he had put some pretty shrewd questions to Muriel while connecting her to this machine and that, and she was wondering, now that it was over, how much of his use of impressive apparatus was window-dressing.

At last he said, "I'm not going to charge you anything, Miss Martin. Which means, I'm afraid, that I can't produce any results."

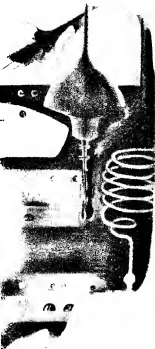
"What we know now is tentative, doctor," Peter put in. "Can't you add anything, even if it's tentative too?"

"I can only say this. If any tampering with Miss Martin's brain was done—and I admit that this is a reasonable conclusion to reach—it was very well done. There is certainly an interesting problem here. It seems extremely unlikely that your loss of memory is due to any neurosis, Miss Martin. There is neurosis present, of course—"

"There is?" said Peter, startled.

The psychiatrist smiled faintly. "I should hardly mention it, if it were significant. There are certain fixed patterns, or nearly fixed patterns, and fixation is





neurosis. I didn't investigate those, because they seem to have nothing to do with the loss of memory. They seem to have been acquired afterward, possibly as a result . . . however, the loss of memory, if not neurotic, would certainly appear to be the result of some operation—"

"Surgical?" asked Peter.

DR. WATERSON shook his head. "There is no evidence of surgery. But there is also no evidence of anything else. I merely assume, from a fair knowledge of the human mind, that it is not surgical. I wish I could say more. I can only repeat—if anything has been done, it has been very well done. That simplifies the matter, if you wish to pursue it."

"Simplifies it?" Muriel exclaimed. "I should have thought it would be the other way round."

"Simplifies it," repeated the psychiatrist patiently. "Have you a lot of money, Miss Martin?"

"No."

"A pity. If you had, I should advise you to go to Earth and consult some of the leading electronic psychiatrists there. You would soon find yourself on the right track. The quality of this hypothetical operation, you see, means that only a very few people could possibly have done it."

"I see," said Muriel.

As he was showing them out,

he asked curiously, "Do you intend to proceed with this, Miss Martin?"

She hesitated. "I don't think so. It's not of tremendous importance to me, and anyway it'll be quite a while before I'll be able to afford to go to Earth."

"A pity. You would have to go there. All the men who might be able to help you are there. Or on Murrane."

If he hadn't added the last three words, principally to himself, the matter would probably have died there. But Peter heard them and whirled around.

"Murrane!" he exclaimed.

"I didn't propose Miss Martin should go there," said the psychiatrist dryly.

"You mean there are people on Murrane who might have done this to Muriel?"

"If anything was done, yes. Murrane is probably well ahead of us in electronic psychiatry. It's the only branch of psychiatry they have, I believe."

"Then something *will* be done about this," said Peter. "Security is taking it up. Come on, Muriel. You're going to Security HQ after all!"

V

WHILE Peter's little plane was making the short hop from Flaylake to Veborn, Muriel

asked coolly, "Am I a prisoner, Peter?"

"That would be a very difficult question to answer," said Peter cheerfully. "Let's pretend you didn't ask it, shall we?"

"No. I don't like that attitude at all. I want to know where I stand."

"How can anyone possibly tell you where you stand? That's what we're trying to find out."

"What are we going to do?"

"First, you'll have a thorough medical examination. That'll show pretty definitely whether you could be a native Murriner or not. If that's negative, as I expect it will be, I'm going to take you to Earth to see those psychiatrists that Dr. Waterson mentioned."

"Why?"

"I don't know exactly why," Peter admitted. "You don't know anything about Security, Muriel, do you? Well, it's an important job. This war is being fought mainly by two strong fleets that are trying to destroy each other, not advance on other objectives. Our fleet, say, can't afford to go too far from this System while the Murriner fleet is still strong. It can't afford to attack Murrane, because that would allow the Murriners to attack Earth freely. Space is big, and the only thing that prevents either side blasting the other's base is the

knowledge that the fleet that tried it would be a total loss. Do you get the idea? There's no split between defense and attack any more—it's just one fleet against another."

"Go on. I don't quite see how it must be like that, but I'll take your word for it."

"Our high command can't be with the fleet, because that's too mobile. The planning is probably done on Earth, but the real base may be on Venus or Mars or even Pluto for all I know. Anyway, you can see that in a war like this, gains by either side can only be made by doing something slightly out of the ordinary. A raid on Murrane can be made and it can be effective, provided it's carefully planned and the enemy gets no hint of the plan.

"There's the rub. Our spies get little or nothing out of Murrane, and Murrane is obviously getting quite a lot out of us. In direct proportion to that, they're doing better than we are.

"So Earth, at the moment, is losing this war, despite greater potential—and the section that's failing is Security. Murrane is keeping this a battle of espionage and counter-espionage, and winning it. Do you see why we have to follow up any line that shows itself? If you were to turn out to be a Murriner spy, we'd be

glad we'd found you, but it wouldn't mean very much. We've found plenty of Murriner spies. But if we found something that was new—"

He brought the plane down neatly at Veborn landing-field. Almost at once the door was opened and two Security Officers waited on either side of it for Muriel to come out.

"Then I am a prisoner?" she said.

"I wish you'd just take things as they come, Muriel," he said. "You've nothing to be afraid of."

"Yes, I have." Incredibly, Muriel burst into tears. "You're trying to make me go to Murrane!" she cried.

Amazed, Peter stared at her.

THE examination put it beyond doubt that Muriel was a native Terran.

"Apart from her slightly above normal reaction time," the doctor observed, "there are several small things which, taken in the aggregate, show that she was born and grew up on Earth. I can't, of course, tell you whether she has ever been on Murrane or not. There are indications that she has. But any trace there may be of the Murrane enzymes is negligible."

Peter visited Muriel in what he insisted on calling her room, not her cell.

"I've been talking to Dr. Johnston, Muriel," he said. "I told him you've been co-opted into Security."

Muriel was calm and at ease again. She had been as amazed as Peter at her breakdown. She wanted to know what could have made her do that.

"And have I?" she asked.

He shook his head. "I have a theory," he said quietly, "that you were in it already."

Muriel started, but didn't speak.

"The doctor here added a few things to what we know about you," Peter went on. "Still nothing definite, but it's building up. Waterson said your brain might have been tampered with by a very good electronic psychiatrist. The doctor here says you may have spent a long time on Murrane."

"Does he? I thought he said—"

"I persuaded him to go a little further after you'd gone. You see, we have to give people the benefit of the doubt, and he was assuming that you were a suspect, that your life depended on what he said. So he stated, correctly, that the traces of Murrane enzymes in your blood were negligible. But when I told him the true circumstances and some of my own ideas, he admitted that while he wouldn't convict you on it, he was pretty certain that you

had been on Murrane . . . possibly for some time. Unfortunately, while your mind was recovering, your body has been dissipating all traces of Murrane."

Muriel nodded. "That's so. Heavy tan, Vitamin D restored, reaction time accelerating again—if I was on Murrane, but only for a year or two, the journey here and a few weeks out in the open on Venus would cover up just about everything."

"The doctor also says," Peter went on, "that you've been physically changed in some way. There are things about you that don't match. But that, again, was well done. Though there have been surgical operations, the main thing was a metabolic change. He can't say what you were like before."

"Another thing," said Muriel quietly—and she told him how she and Nurse Brayne had first concluded that she might not have been on Earth during the last few years.

"It all fits," said Peter.

"With what?"

"It would all make sense," he said slowly, "if you were a Terran agent on Murrane, were found out, and for some reason of their own they didn't kill you but sent you back here, altered."

Muriel tried that for size.

"It seems to make a certain

limited amount of sense," she said cautiously.

"Despite the definite fact that you were never on Murrane?"

"I . . . I'm not sure. But I do know I'm never going there!"

"That," said Peter, "is the most significant part of all."

VI

THE hop from Venus to Earth was almost all acceleration and deceleration, and most people stayed in their bunks. Muriel used the time to read up on Murrane and the war. She had to overcome a disinclination even to read about them, but it could be done. She became interested in what she was reading, and the disinclination to have anything whatever to do with Murrane lost some of its force.

But she remained quite determined that it was out of the question for her ever to go there.

She took it in three parts—Murrane itself, the war, and how either of these affected her or might possibly affect her. She had provided herself with half a dozen pocketbooks, which she scanned for the meat in them.

First, Murrane.

It was a cold world, but so suitable for colonization in other respects that the cold was accepted. There were no seasons; the inclination of the equator to

the orbit was less than one degree, and its eccentricity was also extremely small. The year was 216 days and the day thirty-eight hours, making a period which wasn't a great deal different from Earth's year. The diameter was 7500 miles, less than that of Earth, less even than that of Venus, but the mass and density made up for that. Temperature was Murrane's one drawback. A top limit of 65 degrees F. had been recorded, but normal equatorial temperature range was from 0 to 50 degrees F. Naturally, all the Murriner towns and cities were in a thousand-mile belt around the equator.

Muriel found she knew all this as soon as she looked at it. She knew more, without going farther in the book. She knew that Murrane, surprisingly, was teeming with warm-blooded life, with no intelligent animals to prey on it until men came along. She knew that Murrane was rich in metals of all kinds. She knew that hydro-electric power was abundant. She knew how the Murriners dressed, in a one-piece snowsuit with a hood, over several layers of fine underclothing that trapped many blankets of air as insulation.

It was pretty obvious that she had been on Murrane, despite the insistence by one part of her mind that she had not.

She passed on to a brief review of the war. She didn't feel any need to read more about Murrane and its people and history.

She knew all about them.

IT was a strange war. It had started out of mere suspicion, jealousy and differences, without warning. Earth had been careless, Murrane precipitate. Murrane was the attacker, but there were people on Earth who blamed Earth for the war. After all, there was such a historical record of colonies turning against the parent country that it didn't seem unfair to say Earth should have been more alert and never let a war like this happen.

From the first, it was a space war. There had been raids on Earth and Murrane, but they weren't worth the trouble. Each side insured that the other couldn't have a base near its own territory; any force raiding the enemy planet, therefore, had to start from home, evade the enemy fleet, advertise its presence by an attack against objectives which were in any case well guarded, and then try to get home again.

It couldn't be done. It was a plain matter of statistics. If ships made long detours, their offensive power was cut down by the necessity for so much fuel and

provisions. Moreover, they were unavailable, useless, not paying their way, all the time they were on the two long journeys. And if they attempted quick, bold raids, they were poking their heads into a natural trap. If the Terran fleet did nothing until a Murriner force attacked Earth, it could then pick off the Murriners as and how it liked, where it liked, when it liked.

Since the whole campaign was one of fleet maneuvers, anything that could be found out about those movements was in itself a victory. And at this the Murriners were leading easily. After all, to even a fifth-generation Murriner—that was as far as it went yet—everything Terran was familiar, and Earth was a second home. All the books were about Earth, the language was the same, Murriner cities were copies of Terran cities. A Murriner, save for the small physical differences, was a natural spy to send secretly to Earth.

Terrans, on the other hand, could know little about Murrane. It was changing rapidly, while Earth stayed the same. Information was scanty instead of abundant. An untrained Terran on Murrane would betray himself in five minutes, while an untrained Murriner on Earth was safely mingling with the crowd and learning what he needed to know.

WHAT had been forgotten, for the umpteenth time, was that from the moment a man went to a colony he was a colonist, not a Terran. The colony, wherever it was, was his home. To go there at all, he must have preferred the colony to Earth. He was a malcontent or a pioneer. Before any quarrel started, his side in it was fixed.

Another thing was that Earth couldn't help underestimating Murrane. That had happened, was happening, and would continue to happen. The Terran Command was getting over that error, but the people of Venus, Earth and Mars probably never would. They underestimated Murrane in many respects, but the main one was man-power. Knowing that Earth alone could swallow the whole population of Murrane in one country, they shrugged off the whole question of possible victory for the Colony. They forgot that only a tiny proportion of Earth's potential could be used, and that for the most part Earth's billions considered that their duty in the matter ended with reading the newspapers.

Not much was made in the books of the physical differences between Terrans and the Colonists, Muriel noticed. Probably unimportant. They certainly weren't the cause of the conflict.

When she came to the question of how all this concerned her, the answer was surprisingly simple.

It didn't.

Or didn't seem to.

At New York, Peter took Muriel straight to the Security building.

"This isn't my section at all, of course," he said, "but I'm going to see if I can get permission to follow this thing through to the end. Mind?"

She didn't answer that. She certainly didn't object to Peter staying around, but what exactly to say to him, in the circumstances, was a puzzle she couldn't solve.

VII

AFTER days of exhaustive tests, a nameless director at the Security building told Muriel: "I don't think you can possibly be an agent of ours sent to Murrane, Miss Martin."

"Allowing for all possible surgical and medical transformation?" asked Peter, who had been there most of the time. He had been given permission to continue the investigation of the strange case of Muriel Martin.

"Allowing for all possible change and about twenty per cent over the top, for luck. I'm not going to give the figures, even

to you, Captain Clark, but you can imagine that the number of women agents we send to Murrane is small. And of the women who have been landed on Murrane, we can definitely account for a fair number. You are in some way or another disqualified from being any one of the remainder."

"Can you put some sort of percentage of probability on it?" Peter asked. "I mean, there are strong improbabilities already in Miss Martin's case. If we are ever to find out anything, we'll probably have to accept some improbability or other."

"I should say the chances against Miss Martin having been an agent of ours," said the director, "would be about five hundred to one."

Peter rose. "We'll have to see if we can find a better chance than that, Muriel," he said. "Thanks, director."

Something more definite was provided by the first electronic psychiatrist they visited. He was prepared to state definitely that electronic psychiatry had been used.

"Just taking the patterns of what you know and what you don't, Miss Martin," he said, "they're too neat and definite to be the result of any kind of mental illness. But . . ."

He stared thoughtfully at Mu-

riel, then at Peter—who wasn't in uniform—and back to Muriel.

"This is certainly a criminal case," he said bluntly. "You would hardly have permitted anything of this sort, Miss Martin. I suggest you go to the police, for your own safety. Anyone who went to the trouble of—"

Peter showed him his badge. "If you feel you must report on this, doctor," he said, "please report to Security, not to the civil police."

"I see," said the psychiatrist. "I suggest you consult Dr. Hyneker. You understand, electronic psychiatry is a new branch. I'm a practitioner, not one of the founders of the science. Dr. Hyneker or Dr. Ball may be able to help you further, where I can't."

So they went to see Dr. Hyneker.

VIII

DR. Hyneker was curiously like the psychiatrist they had seen on Venus. He gave the same impression of being a machine himself, as if this new branch of science was actually turning men into quick, jerky, shrewd-eyed machines.

They told him as little as possible, to see what he could find out for himself. Rather surprisingly, the thing he picked out

and concentrated on was Muriel's disinclination to go to Murrane.

"Before your own conclusions can be trusted, Miss Martin," he observed, arranging and rearranging papers on his desk, "you must remove this fixation."

"That's interesting, but how do I do it?" Muriel asked, smiling.

"Go to Murrane."

Muriel had got over trembling with fright or bursting into tears whenever the idea was mentioned. But she frowned, still not liking it.

Peter shot a glance at her, and spoke for her. "Quite so, doctor," he observed, "but how would you suggest she do it?"

The doctor took a sheaf of papers from the bottom of a pile and began to deal them out on the desk like a pack of cards.

"I admit the suggestion, at the moment, is somewhat impracticable," he said. "However, often we psychiatrists must be impractical. Someone comes in and I examine him and find the only real solution to his problem is for him to become a great violinist. But perhaps he has no talent whatever. What do I do?"

He sighed. "Long ago I decided that where people appeared to be reasonably intelligent and stable, the thing to do was to tell them the answer, however impossible it seemed. Last year I told a man to go home and beat his

wife. I was quite certain, I must admit, that he would never be able to do it. Apparently I was wrong. They're now very happy and contented together."

HE collected together the papers he had dealt out and began to fan them out like a bridge hand. "I do this, for example, because I want to pile all these papers together and set fire to the lot. Impossible—by my own decision. So I relieve my feelings by controlling them, destroying their significance, then restoring it."

"But just a minute, doctor," said Muriel. "I haven't come here as a patient, not in the normal sense. I don't really want to be cured of anything, because I'm not aware of anything radically wrong. Except for my memory, and I'm told I can't have that back because there's nothing there. All I want is to find out what happened to me. To know."

Dr. Hyncker's eyes opened wide. "But obviously you can only find that on Murrane," he said chidingly, as if she should have known that.

"What!" exclaimed Peter.

"Of course." He still seemed astonished that what he said wasn't obvious. "Here we have a fairly neat removal of certain memories, and over all—very

untidy—a threat, a positive prohibition against going to Murrane. The job as a whole is extremely amateurish—other things, like your conditioned disinterest in the Earth-Murrane war, make it clear that you were not supposed to know that Murrane was concerned at all. But obviously, from this artificial respect and fear and warning this—this untidy blot over the good work that preceded it, Murrane is the key to the whole thing, and if you ever want to find an answer, you must go there."

He shuffled the papers in his hand. Muriel observed automatically that they were getting rather crumpled and dog-eared by this time.

"I'm sorry," he said in a different tone, "that it's impossible for you to go to Murrane, Miss Martin. Yours is a very interesting case. I should like to see it resolved in some way."

Peter was about to speak, but Muriel waved him silent. From the expression on his face, he didn't appear to have anything very helpful to say.

"You mean if I were to go to Murrane," she said slowly, "I'd know, just because of that, what this was all about?"

"Possibly. It may be more difficult than that. If I say more, I'm guessing . . . is that understood? Very well, then: After the treat-

ment I and others, apparently, have given you, you may take it that merely by returning to Murrane—"

"Returning?" Peter shouted. "You're sure of that?"

DR. HYNCKER turned a pained countenance on him. "This isn't recognized behavior for a psychiatrist's consulting room, young man," he observed. "If you don't restrain yourself, I shall have to continue this discussion with Miss Martin alone."

"I took the fact that you have been there before for granted," he went on, to Muriel. "As I was saying, you may take it that merely by returning to Murrane you will probably, by this time, break down the fixation completely. You will then, as far as I can see, be wholly rational, in the loose way we generally use the term. Going to Murrane guarantees nothing else. But it would probably open up at once some knowledge of the world which would show you definitely that you had previously been there. And *that* knowledge might even make it clear to you where to look further. There wouldn't be so definite a prohibition *against* something, if disregarding the prohibition wasn't liable to produce something—"

"Of course," said Peter. He had himself in control now, and spoke

quite calmly. "Muriel, all this makes sense."

"But I can't possibly—"

"Doctor," said Peter. "Suppose we merely landed her on some quiet, unoccupied spot on Murrane and took her off again. Would that—?"

"We?" said the doctor.

Again Peter had to show his badge.

"I don't know," said Dr. Hyneker. "The only way to find out would be to try. I doubt it. Miss Martin would probably have to make closer contact with the life and conditions of Murrane than that before anything very remarkable would happen."

Then, carelessly, he threw another small bombshell. "If you by any chance do go to Murrane, Miss Martin," he said, "I'd advise you to be very careful about visiting a town called Rillan, and particularly a Dr. James Ball who lives there. Because, much as I hate to say it, I fear that whatever was done to you must have been done by him or under his direction."

IX

THEY asked him all he knew about James Ball, but he waved that aside. "I haven't seen him for years," he said. "He's done most of his work on Murrane."

"A Murriner?" asked Peter.

"Depends what you mean by a Murriner. He chooses to work there, on what he calls the fundamental problems of psychiatry. The removal of your personal memories might have been his work, Miss Martin. The rest is rather clumsy for a man of his skill. I should have doubted whether he'd turn against Earth—but then, he's lived on Murrane for some time. If you want further information on Dr. Ball, I'm not the one to give it. There's a daughter, I think, here in New York. Go and see her."

So Muriel and Peter found themselves on the move again. Peter wanted to talk about what Dr. Hyneker had said, but Muriel made it clear that she didn't. He bore it until they were within a block of the address Dr. Hyneker had given them. Then he caught Muriel's arm and stopped her.

"Let's try to work this out, Muriel," he said. "If this Dr. Ball was the man who worked on your brain—"

"I think he must be," said Muriel thoughtfully. "I remember Rillan. I've been there, I'm sure. But what harm can it do to see Barbara Ball? She can't very well be in touch with Murrane."

"That's one thing to find out first. Wait here while I ring Security."

He disappeared into a drug-store. He was gone only a few minutes. He came back looking thoughtful.

"Security say they've been watching her for a long time. She was at school here when the war started—there isn't much schooling on Murrane, of course, and Barbara was only there for a year when she was fourteen. The rest of the time she's been on Earth. Since the war, it seems she's been moving heaven and earth to get herself into Security as an agent on Murrane. They have nothing against her, but refused her at first because she was too young, and now because she's probably more concerned about joining up with her father again than working for Earth.

"But," he went on, "it seems there's another daughter, Lorna, with Dr. Ball at Rillan. What do you think of that?"

"Should I think anything about that?" she asked, puzzled.

Peter didn't insist on the idea. "Oh, well, let's go and see Barbara."

BARBARA was nineteen, very small, rather dark-skinned, and would have been called pretty only by someone determined to see the best in her. It would have been in order, however, to call her attractive—she had quite a neat figure, rather on

the thin side, and thick dark hair with a luster which many a prettier girl would envy.

Peter showed her his card at once, knowing she would cooperate all she could with a Security Officer. She did. She invited them into a surprisingly expensive-looking lounge with every evidence of excitement.

"I don't want to disappoint you, Miss Ball," said Peter. "We're not here about your application to go to Murrane. That's not my department at all. We want to ask you some questions about your father and—Lorna."

She was disappointed; it was inevitable. Apparently she had set her mind on going to Murrane. She blinked and smiled brightly, but Muriel wasn't deceived. She patted Barbara's knee sympathetically.

"Pity you and I can't do a switch, Barbara," she said. "You want to go to Murrane, and everybody's trying to make me go there, but I don't want to."

"Careful, Muriel," said Peter quietly. "No, it's not that we don't trust you, Miss Ball. But there may be something very important behind this . . ."

He put some questions about Dr. Ball and Lorna. Dr. Ball, it seemed, was about fifty, and had been a medical doctor for some time before he heard of electronic psychiatry. He'd moved into that

branch right at the beginning, and soon, with Dr. Hyneker, was the leading authority on it. He went to Murrane because, he said, on Earth you couldn't see the trees for the forest. The environment of a psychiatrist's patients was so complicated that he could never see the effect of any one item. In a colony, life was so comparatively simple that it was possible to trace things, really cure things which on Earth could only be alleviated. He had started his own school there, experimenting and training electronic psychiatrists.

"You seem to know the background pretty well, Miss Ball," said Peter.

SHE shook her head impatiently. "I'm the dunce of the family," she said.

Lorna had also been at school in New York, but five years ago, when Barbara was fourteen, she had gone to Murrane. Barbara had been left in the general charge of an aunt—actually, on her own.

"Pop believes in people having to look after themselves early," said Barbara.

Lorna had been brilliant. At school and college she had done pretty well in everything, refusing to specialize. She did enough electronic psychiatry to know her way around the subject, but only

from the psychological side. She kept off medicine and concentrated on chemistry.

Peter stopped Barbara when she was in the middle of her description of Lorna.

"Have you a picture?" he asked.

"Of Lorna? Sure, on the table beside you."

Peter looked at it closely. It was rather a shock, in two ways. He passed it on to Muriel, who merely glanced at it casually and put it back on the table.

Apparently Peter's idea wasn't going to strike Muriel at all.

"Miss Ball," he said slowly, "let's suppose that on Murrane for some reason Lorna was changed physically so that she became completely different—so that appearance was nothing to go by. Suppose all her personal memories were removed, so that she didn't know anything that had ever happened to her, any-one she had ever met. But suppose also that her general knowledge, the memories that had nothing to do with Lorna Ball personally, were carefully split off and only lightly covered up. Supposing all that—how would you know that Muriel here wasn't your sister Lorna?"

Muriel wasn't much affected by the idea Peter suggested one way or the other.

But Barbara jumped, went

white, and stared at Muriel.

"She can't be . . ." she murmured. "Lorna's no glamor girl. And she—"

She was troubled by the two things that Peter had noticed about the picture. Lorna wasn't ugly, but at best she was merely a pleasant-looking girl. One would say she looked intelligent, which was true, and avoid altogether the question of whether she was pretty or not.

The other thing was that Lorna and Muriel were so obviously different, beauty apart, that one didn't look for similarities. It was like comparing an orange and an apple. Girls much more like each other would still have been obviously different people.

Barbara, though she called herself the dunce of the family, wasn't stupid. And she had imagination. Her gifts seemed to lie all in that direction, in fact. She was an artist born to a scientist: the intelligence was there, but instead of being calculating intelligence it was talent, apparently. A volume of Beethoven sonatas lay on the piano; the water-colors hung on the walls were probably hers, and Peter wouldn't have been surprised to learn she wrote, too.

Barbara soon got over the plain difficulties of the matter and began to consider the question seriously.

SHE asked Muriel questions on subjects Lorna knew, and apparently threw in a few on subjects Lorna didn't know. Presently, her own knowledge being deficient, she armed herself with an encyclopedia. Muriel wasn't often sure; she usually answered hesitantly. Sometimes Barbara helped her, giving part of the answer to see if Muriel could supply the rest. As a rule she could.

Barbara naturally enough tried for other memories now and then—people Lorna had known, things she had done, places she had visited. Sometimes something came out about the places, but nothing on the other things.

"Have you a scar on your left thigh?" Barbara asked.

"I don't think so."

"Marks like that wouldn't be left," Peter put in. "There would be no point in the other changes, if Lorna could be identified by a simple thing like a scar."

Nevertheless, Muriel rolled down her stocking and Barbara looked closely at the skin. There was a very faint mark which might have been a scar.

"They didn't make it easy for us, did they?" asked Muriel, amused. She was still far less concerned about the whole affair than Peter and Barbara.

"Don't you care?" Barbara asked.

"Of course I care, but—well, after all, I must be someone. It doesn't seem to matter such a tremendous amount who I am, if you see what I mean. If I'm Lorna Ball, fine. If not, I won't be heartbroken."

Barbara looked at Muriel's teeth.

A back tooth was missing that Barbara didn't know about.

"Perhaps there was something unusual about it," suggested Peter.

"There was," Barbara said, with some evidence of excitement. "It was the only one that was filled. Either Lorna got it out since, or they took it out because it could be identified from dental photographs—"

"Then you're certain I'm Lorna?"

"No, not certain. Whoever did this made sure I couldn't be certain. There's nothing conclusive. You don't know things Lorna definitely did know. You do know things Lorna hadn't studied, to my knowledge. But allowing for all that—I think you're my sister."

MURIEL said slowly, "Even if I wanted to go to Murrane I couldn't."

"Perhaps you could," said Peter quietly, watching her closely.

"How?"

"Through Security. The route Barbara has been trying to take."

Muriel looked at Barbara. "If they won't let her go, why should they let me?"

It was Barbara who answered that. "If you're Lorna," she said, "they'll let you go. Terran agents have to know Murrane and be able to act like Murriners. They don't think I can. They've tested me twice. I'm quiet, dreamy and even-tempered, and I should be reckless, hasty and extrovert, or able to act that way." She frowned, then admitted honestly: "I can't, I guess. But you're different. Try Security and see."

Muriel fought a sharp, silent battle with herself. She could be quite happy without ever knowing for sure who she was—and it would be dangerous to go to Murrane as a spy. She didn't think of it as more than that: dangerous. She was quite confident of being able to pass among Murriners as one of them—it seemed like the kind of thing she could do.

But why?

Why take such a risk when it didn't matter? She didn't really care much about what had been done to her. She didn't want revenge. And she still trembled inwardly at the thought of going to Murrane.

Yet what really mattered seemed to be this: she did want

to know more. This was a way in which she might learn.

"Peter," she said abruptly, "am I free? Do you trust me? Do I have to go to Murrane?"

Peter took her hand and pressed it affectionately.

"Let's take them in order, baby," he said. "Are you free? Sure. You have always been. Perhaps Security should be as tough as it's supposed to be, and kill on suspicion. But it isn't. Maybe that's why we're losing the war. It gives the benefit of the doubt, and you know there's so much doubt that Security can't ever touch you. Do I trust you? That's not so easy. Trust has to be both ways. If you trust me, maybe you can see the answer to that."

Muriel returned the pressure warmly. "I like that," she said. "I always knew you were a nice guy, Peter, even when you were acting like a screen villain. Only a good guy would say a thing like that. But you didn't answer the last question."

"Do you have to go to Murrane? No . . . I didn't. Only you can answer that, Muriel."

X

"GOOD luck, Muriel," said Peter. "And—come back, will you?"

Muriel had let him kiss her

before, but this time she kissed him. Then she left the helicopter and struck out for the distant glow of the city.

She was a little light-headed. She was deliberately not thinking of her fear of going to Murrane, and the fact that she was now on it. There was also the danger that would be with her every second of the time she was on the world: the danger of being discovered as a Terran spy. And, curiously, the two fears seemed to cancel each other out.

The ship which had brought her would stay in the vicinity. She didn't know where — she hadn't been told, in case she should be discovered and interrogated. Peter and Barbara were aboard it, and every three days Peter would drop in the helicopter to the same spot to see if she were ready to go back yet or had anything to report.

The ship wouldn't be discovered. A single ship could seldom be detected in space, unless it was moving fast. Almost all the devices for detecting the presence of other spaceships were based on the increase of mass with velocity. The faster a ship went, the more chance it had of getting through a waiting fleet—and the more certain it was to be detected. The slower it went, the safer it was from detection of that kind; but if it should be spotted

by eyes or radar it was a dead duck, with no acceleration built up.

No, Muriel's line of escape was safe enough; all the danger was on Murrane itself.

It was the beginning of the long night of Murrane, and she had been landed between Felter and Ederton. The answers she wanted were probably all to be found in Rillan, a hundred and fifty miles to the south, but she hadn't dared go there at once. For all she knew, perhaps everyone in Rillan would recognize her.

As she walked, she pondered about how familiar this world was to her. She had had the normal training of any Terran who was sent to Murrane as a spy, yet she hadn't been thinking of that when she was careful not to touch the low branches of the Murriner pines. No, there was no doubt that she was familiar with Murrane. It had been obvious during her training by Security.

She didn't think anything had been said about Murriner pines at night in the training she had had from Security. Murrane had once been warmer; many of its plants spent their lives grasping for heat, from any source. Any animal or man who blundered into a pine, particularly, was liable to be clutched and held, if he wasn't strong and nimble, and

drained of his body heat. He might be alive at morning, if he had enough vitality; but probably not. Certainly not if the morning was thirty-eight hours away.

She walked on through the hard snow, adjusting herself to the environment. Murrane's three moons, all of them risen at the moment, gave about the same illumination as a full moon on Earth.

She wore a black snowsuit, plain but neatly cut. It covered everything but her face, hands and feet. On her feet were fur-lined boots; long gloves covered her hands and the sleeves of her suit. Under the snowsuit she wore a similar but finer white coverall, and under that a thin sweater and pantaloons. All this would come off when she went inside. Below this was the indoor dress, creaseless slacks and a sweater. Any sins of the flesh committed on Murrane weren't caused by seeing too much of it.

She stopped as a call sounded behind her. She wasn't frightened; she was rather glad that her first meeting with a Murriner should be like this, alone, in the open, at night. Women on Murrane had nothing to fear from such encounters—the penalties for all kinds of sex crime were too severe.

She couldn't see any more of

the man who came up to her than he could of her—a few square inches of face above a bulky figure.

"Oh—a girl!" he exclaimed in some surprise. "You're late on this road, aren't you?"

Already there were slight physical changes; soon there would be a distinctive Murriner accent, then a dialect. There was no radio communication between Earth and Murrane, of course, nor would there ever be. That meant that any change in pronunciation would be a divergence.

"Yes, I'm later than I meant to be," said Muriel, in the same accent. "I thought I'd make Felter an hour ago."

They walked on together.

"Looking for a job?" asked the Murriner.

Terran Intelligence, poor as it was, could at least be trusted to give its operatives a sound identity and purpose. "Yes," said Muriel, "they need chemists at the factory."

"Where are you from?"

"Rillan," she told him.

"Why leave Rillan for a little place like this?"

"Rillan's gone all psychiatric and biological. This looks as if it's going to be the place for chemists."

"You're smart," said the Murriner, after considering that. "What's your name?"

Muriel gave him her third identity—Thelma Bittner.

"Glad to meet you. I'm Bill Seuter. Say, I used to work in Rillan. They still got that old ship in the square?"

Muriel turned her head to stare at him. "Ship? Square?"

"Sure, the museum piece. Used to pass it every day."

SHE hadn't remembered much about Rillan, but a few vague pictures came up as he spoke. More than enough for her to say: "Not in Rillan you didn't. No offense—you think I'm a Terran spy, perhaps?"

Seuter laughed. "We check on anyone who arrives in a place. That's enough. We don't make many mistakes."

"We?"

"I'm in Counter-espionage."

"Oh. You check on people even before they get to Felter?"

"Sometimes. I don't follow any fixed routine," said Seuter complacently, "but I don't miss much. You're all right. When we get where it's warmer, remind me and I'll give you a CE pass for Felter."

Security didn't know anything about CE passes.

"Thanks," said Muriel. "But, say . . . how could you tell I'm all right? Just because I know there's no ship in the square at Rillan?"

"Nope," said Seuter, still complacent. "Fact is, Earth and Murrane are growing apart every minute. I don't need to run lab tests on you, even if I knew how. Talking for five minutes is enough."

He would be right, too, Muriel thought—except with someone like her who had actually lived on Murrane.

"Find many?" she asked.

"Three a month. I spend a lot of time on roads outside towns and pick up people like you."

They had reached the town. No snow lay there; Murrane had only electric power, but there was any amount of that. It was because there was only electric power that people had to do so much walking between towns. Electric power wasn't much good for the heavy vehicles that would be needed to force their way through the drifts and ice, and instead, an electric railway system was being gradually extended. Muriel hadn't had to explain that she had gone by train from Rillan to Ederton and walked on to Felter—that would be taken for granted.

Seuter gave her a pass, saluted her with a wave of his hand and went back to patrol the roadway. Muriel looked after him thoughtfully. Because of him, three Terrans would be identified and shot in the next month or so. But he

was only doing his job, and doing it well. She liked him. Sometimes one met someone for only a few minutes, said only a few words and then parted, but felt as if one had made a friend. It was like that with Seuter.

She hoped desperately that she would find what she was looking for, and that it would end this senseless war. Surely if it could only be stopped soon Earth would have the sense never to make the same mistakes again, whatever they were, and Murrane would know better than to fight a war for freedom that had never really been denied.

Suddenly she realized that she hadn't been afraid since she set foot on Murrane.

XI

SHE got the job. On Murrane, so far, there was no system of qualifications and references. They tried you in a job, and if you did it well, you were in.

In the first few days she saw how easy it was for anyone who knew Murrane well to pass as a Murriner, and how utterly impossible it was for anyone who didn't.

The physical differences were nothing — absolutely nothing. What mattered was whether you were a Murriner or not. Earth was flooding Murrane with op-

eratives who weren't, and they stood out like sore thumbs. Muriel saw one of them. She couldn't do anything about him. He was obviously being left alone for the moment, carefully watched, no doubt, to see what he would do.

How could Security hope to train agents? What they needed wasn't the right knowledge, but the right attitude. That couldn't be learned in New York.

She met Seuter again a few days later at the factory. He was there checking on the other new chemists.

"Say!" he said when he saw her, "if I'd seen more of you that night I'd have stayed with you longer."

"I thought so too," she admitted frankly. "I'm not usually dropped as quickly as that."

"Why aren't you married?" he asked bluntly.

"Because I'm a chemist. There's no romance in chemistry."

"There's one chemist I could go for."

She held up her hand in protest. "No," she said, "not a CE man. Someone will shoot you some day. I'm not going to marry anyone who's going to be shot."

But that raised another problem. In frontier country there are always more men than women. The women on Murrane were

very quickly married. At twenty-five, on Murrane, a healthy, pretty girl who was unmarried was an enigma to everyone. Muriel would have to do her job in a hurry, before anyone became puzzled enough to be suspicious.

Every three days, she knew, Peter was landing his little shell of a helicopter in the same spot to take her away if she was ready.

Ready! She hadn't even started.

Working on the basis that the secret she was looking for was psychiatric or anthropological, she studied the Murriners around her not individually but in the mass. Nothing suggested itself. They were different from Terrans, of course, but such differences as she saw were known or guessed on Earth.

THEY were aggressive-defensive, as Peter had once said. They boasted of how much better they were than Terrans, and secretly believed the opposite. They were reckless, brave, with a fine disregard for male life. Women weren't allowed to be brave, however. They were too valuable for the young Murriners they could produce. Murriners in general were less intelligent than Terrans, more ready to take chances, more quarrelsome, more immature, more generous, more vital.

But all that was known. What was it that wasn't known?

She saw nothing of anyone who was actually engaged in fighting—no space-navymen, no ammunition dumps, no military depots, or, in fact, anything whatever that was connected with the war. She was very careful not to. That was bound to be a dangerous line of investigation. The regular Terzan agents would be working on that problem, and succeeding moderately or failing completely, as usual.

She was pretty certain, moreover, that what she wanted wasn't to be found under the heading of normal military information.

Only when others introduced the subject did she even talk about the war. The usual attitude was about what she expected. Her fellow-workers had no very clear idea of what was going on, or why it was going on; but they were naturally, temperamentally in favor of a war against Earth. To most of them, the issue was plain—Murrane was teaching Earth a lesson. Earth was being shown that you couldn't push Murriners around. They knew, most of them, that there was more to it than that. But that was policy—none of their business.

After two weeks of merely being an ordinary Murriner chem-

ist, Muriel decided that she would have to risk visiting Rillan. Dr. Hyncker was probably right. The secret would be there. It certainly didn't appear to be in Felter. She had seen nothing that seemed worthwhile even trying to follow up.

She told Senter she was going back to pick up some things.

"Made up your mind to stay, baby?" he said. "Fine. I'm still hoping to change your mind about CE men."

"You might at that," said Muriel encouragingly. "I haven't known many. And maybe it'll be a long time before someone shoots you."

XII

MURIEL was quite well aware that it was dangerous. Rather than scratch cautiously along the edges of the affair, however, she marched straight up to 17 Third Street, rang the bell and asked the woman who came to the door if Dr. James Ball lived there.

"Not now," said the woman, apparently unsuspicious. "I don't know where he went."

"Can you tell me anyone who might?"

The woman considered. "There's Joe Cruickshank at number 14," she said. "He used to be a friend of the doctor."

Muriel thanked her and crossed the street to number 14.

Joe Cruickshank was an oldish man with very heavy black brows. When Muriel mentioned Dr. Ball he drew them together in a dark frown, almost hiding his eyes.

"You a friend of his?" he demanded. "Or maybe a friend of his daughter?"

Despite the signs, Muriel thought the best answer was, "Yes."

"You want to know what happened to him?"

"And Lorna."

He hesitated; then said abruptly, "Come in," and turned away without waiting to see if she was following him.

There was nothing luxurious about the sitting-room into which he led her, but in a simple way it was very comfortable. An electric fire was set into one wall; otherwise it was like a sitting-room in a country cottage on Earth circa 1880. Cruickshank sat heavily on a rocking-chair and motioned Muriel to an arm-chair on the other side of the fire.

"Who are you?" he demanded.

Muriel didn't want to give any of her three names. It was still not proven that she was Lorna Ball, and in any case she clearly couldn't give that name. If the theory she was working on was correct, she had been named

Muriel Martin on Murrane, probably in Rillan, and that was equally undesirable as a name to give. And though Thelma Bittner had gone back to Rillan quite openly, she didn't want Thelma Bittner to be known as having shown interest in James and Lorna Ball.

SO she gave a fourth name, and a few brief details to satisfy Cruickshank. She had plenty of information that she could use to prove she had known Lorna well.

"And you don't know anything about what happened to them?" asked Cruickshank.

"No. Nothing."

"Neither does anyone else," said Cruickshank bitterly, apparently deciding to trust her. "I think they're both dead."

"Dead! Why?"

"When the war started, Jim wouldn't join CE. He wouldn't have anything to do with it, or the war. Well, you know what Jim Ball has done for Murrane. CE might want to shoot him or lock him up, but most of us here in Rillan had other ideas. CE didn't dare touch him. He went on working as usual, though both he and Lorna had to report to CE every second day. They weren't allowed to write or receive letters."

"That's why I never got any

reply!" said Muriel adroitly.

"Jim told me one day he knew the real reason for the war—"

"Did he tell you what it was?"

"If he had, I wouldn't be here now. CE shot me full of drugs later, and only let me go when they were sure I didn't know anything. Anyway, the day after Jim told me that he disappeared. So did Lorna."

He breathed hard. "Some of us got together. CE may be spying on us and telling us what to do, but CE isn't Murrane. We weren't afraid of CE. We went along to the office, a whole crowd of us, ready to tear the place apart. But they fobbed us off with some story—told us the doctor and Lorna would be back in two weeks. So we went away."

Cruickshank wasn't looking at her, but into the orange glow of the fire. "They came for me that night and made sure I didn't know anything. They were polite enough, and I didn't make an issue of it.

"Two weeks later we went back and they told us Jim and his daughter had been deported to Earth. We didn't believe them. We went all through the office, but there was no sign of either of them."

CRUICKSHANK'S voice rose. "They'd been shot, that's why! CE knew it couldn't keep

them prisoner—we'd have had them out in no time. Jim Ball was never against Murrane. Everyone knew that. Whatever CE had against them, or thought it had, it couldn't bring them to trial. It couldn't keep them. The only thing it could do was kill them and hide their bodies so that no one would ever find them. Well, whoever harmed Jim Ball or his daughter was no true Murriner, and I don't care who hears me say so! They were good friends to all of us!"

He glared at Muriel as if she were CE itself.

"Maybe CE told the truth," said Muriel. "Maybe they were deported."

"Would CE give Earth a man like Jim Ball, for free?" said Cruickshank derisively. "No, CE wouldn't do that. CE shot them!"

There seemed to be very little more Cruickshank could tell her. Unless . . .

"How did Dr. Ball look when he told you he knew the real reason for the war?" she asked. "Happy? Sad? Disillusioned? Amused?"

"None of those. Just . . . surprised. Sort of 'Who'd have thought it?'"

That was something, she thought. She was practically certain, now, that she was Lorna Ball.

She got one thing more from

Joe Cruickshank—a name and address. It was her only lead now.

If Cruickshank couldn't tell her any more, clearly the thing to do was to go to someone who could—whether he would or not. She didn't want the local CE Chief or second-in-command. They would be too important, too well-guarded perhaps. They might also be too clever or too fanatic. So she had asked for the name of the man who rated about third. He must know the secret, and there was a better chance that he would be easy to get to.

The man was Edward Voigt, 27 Seventh Street.

She advised Cruickshank, as she left, to forget that he had ever seen her; but he wasn't curious. He was sunk in his anger at what he believed had happened to Jim and Lorna Ball.

XIII

VOIGT seemed to have been a good choice. His home was no bigger than Cruickshank's, and Muriel was inside it, standing in the doorway of the kitchen, waiting. She had had to break a catch on a bedroom window, but it was already dark and she was sure no one had seen her.

She had planned carefully; no further planning would help much. Peter would land outside Felter that night—she had to

catch the train in two hours' time if she didn't mean to wait three days more. She wasn't optimistic enough to expect to have the information she wanted when the ship picked her up, but she meant to take this chance of getting it—and if she failed she'd have to leave Murrane anyway.

Surely Voigt must come soon. He lived alone, apparently. Muriel had her gun in her hand, silenced. She stood in the dark, alert for the first sound of anyone entering.

At first she had been afraid he would come home too soon, for she couldn't leave Rillan until the train went, and it would be dangerous to wait anywhere. But as the time slowly passed, she began to fear that he wouldn't come home at all, or would be too late for her to do what she wanted to do and still catch the train.

She had wound her scarf round her face. Very likely Voigt had seen her before. He would know when he saw her that she was Muriel Martin, who had been Lorna Ball. And he would know many more things which Muriel herself didn't know. She probed her mind for anything she knew of Voigt, but there was nothing. There was still that curious division. Many things in Rillan were quite familiar to her, but she remembered nothing that had ever

happened there. She must have known Joe Cruickshank once, but he was as much a stranger to her as she was to him.

At last, a key scraped in the lock. Muriel tensed. The next few minutes would not only mean success or failure, but perhaps, quite independent of that, life or death. She wasn't sorry she had chosen this way, however. At last she was going to be face to face with someone who knew what she wanted.

There was a step in the vestibule, then the light clicked on. Muriel stepped in from the kitchen as Voigt closed the other door, and he saw her at once.

"If you make a sound," said Muriel softly, "I'll shoot to kill."

VOIGT gasped. Muriel had expected he would be a young man, ambitious, a future local CE Chief. But he was old, and had probably climbed as high in the organization as he would ever go. She rejoiced; that was better still.

"Do you want to live, Voigt?" she asked. "I want information. If you give it, no one need know I got it from you. If you don't, I kill you and get it from someone else."

"You're a Terran!" Voigt exclaimed.

She pulled aside her scarf.

"Do you know now why I'm

here?" she asked quietly.

He went white. "Muriel Martin," he breathed, but she caught the note of interrogation he couldn't keep out of it.

"Lorna Ball," she said evenly.

"But you can't know! They told us—"

"As you see, I do know." She was trying to say as little as possible that might reveal the limitations of her knowledge. "Now, Voigt, do I get what I want, or do I shoot?"

Suddenly he stiffened. "Yes, get it over with. You'd never let me live."

That was unfortunate. She apparently had good reasons for killing him. Voigt knew them, and she didn't. "For what I once knew, I may," she said. "What was it that was so important you had to kill my father?"

"I didn't! You're only guessing."

"Keep your voice down," she murmured. From the frantic way he talked, how he had looked when he recognized her, and the way he had said "You'd never let me live," she was almost certain that her father was dead, and that Voigt was the man who had actually killed him. It was a piece of bad luck if Voigt was the killer. Having no recollection of her father she felt no urge to revenge, but Voigt would never believe that. Her threat was

weakened because he believed he must die anyway.

"Listen," she said. "I give you my word that if you tell me, I'll tie you up and leave you unhurt. What did my father find out?"

He was frightened, and she was playing on that. A brave man would have laughed at her, and she would have been helpless.

"I don't know," Voigt said desperately. "I didn't understand it. It was too complicated."

Muriel shook her head. "Complicated things aren't that important. This is simple. You can tell me in one sentence."

She saw that he could. He was easy to read. She forced herself to be patient. She ought to be able to get what she wanted from a man as scared of death as Voigt was.

"I don't like the idea of torture," she said, "but maybe it's the only thing you understand. If I shot you two or three times in the stomach, you'd probably want me to finish you off. Would you rather be begging for life or begging for death?"

HE clutched the back of a chair to hold himself up. "We let you go," he said piteously.

"You can hardly expect me to be grateful. Well, what's it to be?"

"It's mutation," he said, his

nerve gone. The words came out cracked, almost unrecognizable. "Once we've mutated, we can't mutate again. We can only go back to Earth. We're prisoners here, we can't expand, we can't—"

By a strange quirk of emotion, he recovered his courage the instant it was too late. He flung himself at Muriel, his mouth opening to shout. She shot him in the shoulder, thinking it would stop him. Instead, it made him wild. He thought he was dying, apparently, and rushed forward to take Muriel with him. Muriel shot for his legs, but he was pitching forward to dive at her knees and took the little bullet full in the top of his head. He crumpled like an old suit.

Curiously, Muriel was appalled. It didn't seem to matter that he had killed her father and would have killed her if he'd reached her. She had talked grimly of shooting him in the stomach, yet she was horrified at the thought that she had killed him. She bent for a moment beside him in the futile hope that a man with a bullet through his brain could be merely stunned, not dead.

But then what he had said drove other considerations from her mind for the moment.

There must have been a weakness, after all, in the job CE had done on her. For she knew at

once that what Voigt had said was true—and her mind leaped the gap of forgetfulness to wide, foresighted conclusions that it must have reached once before.

She needed no more. She understood. She had no proof, but she knew she could get it.

There was a limit to the powers of adaptation of those intensely adaptable creatures, human beings. They would go to a new world and make it their home, and in doing so they would change to meet the new conditions—a little or a lot, it didn't matter. They would always have to do that, for no world would ever be quite the same as Earth. And having changed, they lost some of the power to change again. They could go back—Earth itself would always be a refuge to them, a refuge from which, eventually, they could go out anew to other worlds, their power of adaptation restored.

But Murrane was the Murriners' prison. Cut off from Earth, they could never live freely, naturally, on any world but their own. And the Murriners, almost exclusively, were restless, unsatisfied, hot-blooded pioneers.

The very thought of encirclement restriction, would be enough to make any Murriner fight his shadow, let alone the world that held the key to freedom.

It was as simple as that.

HER preoccupation with the fact that she had killed a man was almost her undoing at the station. She didn't even notice the CE man staring at her closely until he spoke to her.

"Where are you going?" he demanded.

She brought her attention back with a jerk. It would be tragic to be discovered now.

"Ederton—for Felter," she said, and fumbled in her pocket. She gave him Seuter's pass.

"What have you been doing here?"

"I've been visiting a relative."

"Who?"

She couldn't give Joe Cruickshank's name. In a few hours, they would find the whole story and shoot him as a traitor.

"Ted Voigt," she said boldly.

"Oh." His face relaxed. But he put one more question to make sure. "What kind of clock has he on the mantel?"

Muriel laughed. "There isn't a mantel. There's an alarm clock on a little table. The floorcloth's green and white squares." And Voigt's lying on it, she thought. "The curtains are dark green and in one corner—"

"All right," said the CE man. "There's your train."

FROM the moment the train reached Ederton onwards, Muriel was really terrified, for the



first time since she had landed on Murrane. Now that she was so near leaving the planet, all the anxiety and nervousness and fear she might have felt before, but hadn't, seemed to pile up in one tidal wave of terror. She was alternately cold and hot. Her legs seemed about to give way and pitch her forward in the snow. She saw no one on the road, but she was sure that if she looked behind she would see a mob at her heels.

When she reached the arranged spot and waited, she forgot all about the Murriner pines, and was pulled against the trunk of one before she even noticed the questing branch.

Other branches swung slowly towards her to trap her inextricably, and already she felt the chill of the trunk against her back. She fought wildly with the branches that closed tightly across her body, crushing her ribs. The only way out was under—she got both arms against a branch and forced herself down, straining to tear her snowsuit because it was firmly caught. Very slowly it gave, and branches rasped over her chest.

She slid to the ground, her arms still trapped above her head, and tried to dig her heels into the ground to drag herself clear. The snow gave no purchase.

She relaxed completely, and

after a few long seconds the branches above her slackened very slightly. She waited, gathering her strength, then suddenly threw herself away from the tree with a heave of shoulders and legs. Her hands came free.

Muriel got to her feet and stood gulping for air, laughing weakly when she found that instead of having two or three ribs broken, as had seemed likely, she wasn't even scratched. Her heavy clothing had taken the brunt of the damage.

But she hoped Peter would hurry up, for she was wet through and the freezing air was getting inside her torn clothes. The numbness in her side wasn't a wound—it was the cold air of Murrane sucking warmth from her skin.

As a dark shape dropped from the slightly less dark sky, she fell on the snow in a faint.

XIV

MURIEL awoke in bed aboard the ship, warm, dry and comfortable—and obviously safe. She remembered dimly saying, "Peter, I killed a man!" and Peter's cheerful, unexpected reply, "Good for you."

He was sitting on the bed now.

"You didn't put me to bed, did you?" she gasped.

He grinned and nodded across

her. Muriel turned and saw Barbara, sitting and watching her.

"Hallo, Barbara," she said. "I am your sister."

"I know it."

"Dr. Ball"—it didn't seem natural to call him anything else—"Dr. Ball is dead."

Barbara nodded. "I guess I knew that too."

"I killed the man who did it, if that's any comfort. I didn't mean to do it."

There was a silence, and she knew they were waiting to hear whether she had succeeded or failed.

"Yes, I got what I was looking for," she said. She told them.

Peter, she saw, found it very difficult to understand. He couldn't quite see the process, or what it meant, or how it could be so important. Most particularly he couldn't see why this, known only to Murrane's CE organization, should make them goad their people on to fight Earth.

"Surely the effect would be just the opposite," he said. "Wouldn't they try to straighten out the differences with Earth that already existed, so that they could—"

Muriel had been watching Barbara. "You understand, Barbara, don't you?" she said.

"I think so," Barbara said slowly. "It's like this, Peter. Think

of a man and woman crossing a tropical desert back on Earth. The man's stronger—he carries the water and supplies. And after long, scorching days of travel, the woman thinks, Suppose he goes on and leaves me while I'm asleep? She knows she'll die of thirst. She doesn't dare ask to carry some of the water, for the man may refuse. She may put the idea of leaving her into his mind. So after days of this, out of her fear, she takes the water from the man while he's asleep and goes on alone. Perhaps she kills him too, to make sure. Do you see?"

MURIEL nodded. "That's it. CE is naturally suspicious, Peter—like some of Earth's Security Officers. It finds that Murrane is dependent on Earth. Murriners can't colonize for themselves, can't do anything but stay in their own hard, cold world, except with Earth's gracious permission—and colonists are the most independent human beings in the Galaxy. They won't ask for anything they think they might be able to take. So CE, knowing this, sets the Murriners, who are always ready for a fight, at Earth. Make Earth ask for terms, and demand a slice of Earth itself, where Murriners can—"

"Yes, I see that," said Peter.

becoming excited. "But this means—"

"The end of the war, anyway. I always knew that I expect they guarded this secret in the hope that they'd get what they wanted before we found out what it was. And beyond that—"

Peter jumped up. "I'll get us to Security HQ on the double!"

He was gone.

Muriel smiled wryly, and Barbara, seeing her smile, grinned too. "I'm afraid he's forgotten about you, Lorna," she said teasingly. "He's become a Security man again."

"Don't call me Lorna," said Muriel. "I stopped being Lorna when they took away my memories."

"Couldn't you ever get them back?"

"No. You could tell me what happened, and I'd believe you. But I'd only be remembering what you told me, not what happened. I'm used to being Muriel Martin now—I'd rather stay that way."

Presently Barbara murmured, "Science is often like that—expecting something until something else proves to be true. Isn't evolution supposed to increase range of adaptability, not diminish it?"

"True—yet we can't extract enough oxygen from water with the lungs we have now, which

our ancestors may have done once. No, that's not the important thing about this, Barbara. Can't you see it?

"Nature often seems to have thought of situations that happen to us, long before they happen. When we're fighting and killing each other, more children are always born than at any other time. And nature even seems to have allowed for nuclear weapons. People exposed to hard radiation just don't have children, if they would be monsters. If children are born, they're all right. If we find out from the genes that they wouldn't be all right, we don't have to sterilize anybody, for they're sterilized already. Hard on the individual, sometimes, but excellent for the race."

"Now look at this. Human beings stretching out to the stars and adapting, necessarily, to survive in different conditions. No difficulty in that. They adapt easily and logically."

"But now it seems that the human race will always be tied to the world that produced them. Isn't that wise, too? There will be many worlds, many different peoples, some a lot more different from us than the Murriners. But it's still a unit, not a lot of units. The different peoples are all bound, not to each other, but to Earth. It's like the spokes

of a wheel. No matter what quarrels there will be—and there will still be quarrels—nature keeps mankind in one unit."

She looked around for a wrap. "I'm all right. I want to get up."

PEOPLE were rarely kept in bed to rest now, when they wanted to be active. The patient was at last accepted as the best authority on what was good for him—or her. Barbara produced a pink lace negligee.

"That will do nicely," she said, "if your Security man manages to get over one kind of excitement and comes looking for another."

Laughing, Muriel protested.

Barbara grinned at her. "You needn't be so restrained," she said. "I've talked with him often enough to know you're in no danger of losing his respect. For a Security Officer, he's all right. Nail him, Muriel."

"I still want a nice respectable dressing-gown."

Barbara sighed and produced one. Muriel got out of bed, steady enough despite a slight heaviness of head and a burning sensation where the pine branches had scraped her ribs. She put on the wrap, and when she turned Barbara was gone.

Suppose, she thought, amused, that after all this I shouldn't want Peter? People were taking it pretty much for granted. But she

certainly didn't mean to marry anyone until she felt a little more stable in her environment again, bolstered up by memories and friends and security. Not even Peter.

There was a knock on the door. "Wait," she called peremptorily.

"I'm sorry, Muriel," came Peter's voice. "I know I forgot all about you for a moment."

Too many people rushed into marriage. If Peter did ask her, she would think it out very carefully, as a scientist should, taking her time. She would weigh all the advantages and disadvantages, and she would make very sure that she and Peter were right for each other before she would . . .

"You must admit," said Peter, "that I only neglected you for something pretty big. You told me so yourself."

She picked up the lace wrap to throw it out of sight. It wasn't that she thought there was anything wrong with it, she admitted to herself. She just didn't have the nerve to wear a thing like that.

"Please," said Peter.

She threw off her dressing-gown and slipped into the pink wrap. It settled on her like a cloud of perfumed mist.

"Come in, Peter," she said.

—J. T. M'INTOSH

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WE'RE CIVILIZED!

By MARK CLIFTON and ALEX APOSTOLIDES

*Naturally, the superior race
should win . . . but superior by
which standards...and whose?*

Illustrated by BALBAUS

THE females and children worked among the lichen growth, picking off the fattest, ripest leaves for their food and moisture, completing their arc of the circle of symbiosis.

The males worked at the surface of the canals, or in open excavations. Their wide, mutated hands chipped into the rock-hard clay, opening a channel which

was to be filled with sand and then sealed off with clay on all sides and surface. That water might seep through the sand without evaporation, without loss, from the poles to the equator of Mars—seep unimpeded, so that moisture might reach the lichen plants of everyone, so that none might thirst or hunger.

The seepage must flow. Not even buried in the dim racial memory had there ever been one who took more than his share, for this would be like the fingers of one hand stealing blood from the fingers of the other.

Among the Mars race there were many words for contentment, kinship of each to all. There were words to express the ecstasy of watching the eternal stars, by night and by day, through the thin blackish atmosphere. There were words to express the joy of opening slitted nostrils to breathe deeply in those protected places where the blowing sands did not swirl, of opening folds of rubbery skin to catch the weak rays of the distant Sun.

But there were no words for "mine" as separate from "yours." And there was no urge to cry out, "Why am I here? What is the purpose of it all?"

Each had his purpose, serene, unquestioning. Each repaired or extended the seepage canals so that others, unborn, might know

the same joys and ecstasies as they. The work was in itself a part of the total joy; and they resisted it no more than healthy lungs resist clear, cool air.

So far back that even the concept of beginnings had been forgotten, the interwoven fabric of their symbiotic interdependence seeped through their lives as naturally as the precious water seeped through the canal sands. As far back as that, they had achieved civilization.

Their kind of civilization.

CAPTAIN Griswold maintained an impassive face. (Let that, too, be a part of the legend.) Without expression, he looked through the screen at the red land flashing below the ship. But unconsciously he squared his shoulders, breathed deeply, enjoying the virile pull of his uniform over his expanding chest. Resolutely he pushed aside the vision of countless generations of school children, yet to come, repeating the lesson dutifully to their teachers.

"Captain Thomas H. Griswold took possession of Mars, June 14, 2018."

No, he must not allow any mood of vanity to spoil his own memories of this moment. It was beside the point that his name would rank with the great names of all times. Still, the history of

the moment could not be denied.

Lieutenant Atkinson's voice broke through his preoccupation, and saved him the immodest thought of wondering if perhaps his cap visor might not be worn a little more rakishly to one side. He must father a custom, something distinctive of those who had been to Mars—

"Another canal, sir."

Below them, a straight line of gray-green stretched to the horizon, contrasting sharply with the red ferrous oxide of the landscape. An entire planet of ferrous oxide—iron—steel for the already starving technology of the Western Alliance. The captain felt a momentary irritation that even this narrow swath displaced the precious iron ore.

Obviously these canals served no purpose. His ship had circled the planet at its equator, and again from pole to pole. Canals everywhere, but nothing else. Enough time and fuel had been wasted. They must land. Obviously there was no intelligent life. But the history of the moment must not be marred by any haste. There must be no question within the books yet to be written. There must be no accredited voice of criticism raised.

"My compliments to Mr. Berkeley," he said harshly to Lt. Atkinson, "and would he kindly step to the control room?" He

paused and added dryly, "At his convenience."

Mister Berkeley, indeed. What was it they called the civilian—an ethnologist? A fellow who was supposed to be an authority on races, civilizations, mores and customs of groups. Well, the man was excess baggage. There would be no races to contact here. A good thing, too. These civilian experts with their theories—show them a tooth and they'll dream up a monster. Show them a fingernail paring and they'll deduce a civilization from it. Nonsense!

"You wanted to see me, Captain?" The voice was young, quiet, controlled.

WITHOUT haste, Captain Griswold turned and faced Berkeley. Not only a theorist, but a young theorist. These superbright young men with their sharp blue eyes. A lot of learning and no knowledge. A lot of wisdom and no common sense. He carefully controlled his voice, concealing his lack of respect for the civilian.

"Well, Mr. Berkeley, we have quartered the globe. We have seen no evidence of civilization."

"You discount the canals, Captain?" Berkeley asked, as if more from curiosity than refutation.

"I must discount them," the captain answered decisively.

"Over all the planet we have seen no buildings, not even ruins, no evidence at all that intelligence exists here."

"I consider straight lines, running half the length of a world, to be evidence of something, sir." It was a flat statement, given without emphasis.

Arguments! Arguments! Little men who have to inflate themselves into a stature of importance—destroy the sacred history of the moment. But quietly now. There must be no memory of petty conflict.

"Where are their buildings, Mr. Berkeley?" he asked with patient tolerance. "Where are their factories? The smoke from their factories? The highways? The transportation facilities? Where are the airplanes? Even this thin air would support a fast jet. I do not require they have spaceships, Mr. Berkeley, to concede them intelligence. I do not require they be the equal of Man. I also have some scientific training. And my training tells me I cannot recognize the existence of something where there is no evidence at all."

"The canals," Berkeley answered. His voice also was controlled, for he, too, knew the history of this moment. But his concern was not for his own name in the history books. He knew only too well what its writers did

to individuals for the sake of expediency. His concern was that this moment never be one of deep shame for Man. "Perhaps they have no buildings, no factory smoke, because they don't need them. Perhaps they don't have highways because they don't want to go anywhere. Perhaps their concept of living is completely unlike ours."

GRISWOLD shrugged his shoulders. "We speak an entirely different language, Mr. Berkeley."

"I'm afraid you're right, Captain," Berkeley sighed. "And it might be a tragic thing that we do. Remember, European man spoke a different language from that of the American Indian, the Mayan, Polynesian, African, Indonesian—" He broke off as if the list were endless. "I ask only that we don't hasten into the same errors all over again."

"We can't hover here above the surface forever," Griswold said irritably. "We have quartered the globe. The other experts are anxious to land, so they can get to their work. We have made a search for your civilization and we have not found it."

"I withdraw all objections to landing, Captain. You are entirely correct. We must land."

The intercom on the wall squawked into life.

"Observation to Control. Observation to Control. Network of canals forming a junction ahead."

"Prepare for landing, Lieutenant Atkinson," Griswold commanded sharply. "At the junction." He turned and watched the screen. "There, Mr. Berkeley, dead ahead. A dozen—at least a dozen of your canals joining at one spot. Surely, if there were a civilization at all, you would find it at such a spot." Slowly and carefully, he constructed the pages of history. "I do not wish the implication ever to arise that this ship's commander, or any of its personnel, failed to cooperate in every way with the scientific authorities aboard."

"I know that, Captain," Berkeley answered. "And I agree. The junction, then."

THE sigh of servo-mechanism, the flare of intolerably hot blue flame, and the ship stood motionless above the junction of canals. Ponderously, slowly, she settled; held aloft by the pillars of flame beneath her, directly above the junction, fusing the sand in the canals to glass, exploding their walls with steam. Within their warm and protected burrows beside the canals, slitted nostrils closed, iris of eyes contracted, fluted layers of skin opened and pulled tight, and opened again convulsively in the

reflexes of death.

There was a slight jar only as the ship settled to the ground, bathed in the mushrooming flame.

"A good landing, Lieutenant," Captain Griswold complimented. "A good landing, indeed."

His head came up and he watched the screen to see the landscape reappear through the dust and steam.

"Prepare to disembark in approximately six hours, Lieutenant. The heat should have subsided sufficiently by then. The ship's officers, the civ—er—scientific party, a complement of men. I will lead the way. You, Lieutenant, will carry the flag and the necessary appurtenances to the ceremony. We will hold it without delay."

Berkeley was watching the screen also. He wondered what the effect of the landing heat would be on the canals. He wondered why it had been considered necessary to land squarely on the junction; why Man always, as if instinctively, does the most destructive thing he can.

He shrugged it away. Wherever they landed might have been the wrong place.

FARTHER along the canals, where the heat had not reached, the Mars race began to emerge from their protecting bur-

rows. They had seen the meteor hurtling downward, and it was part of their conditioning to seek their burrows when any threatening phenomenon occurred.

Flaming meteors had fallen before, but never in the interlocked racial mind was there memory of one which had fallen directly on a canal junction. Within the fabric of their instinct, they sensed the fused sand, the broken clay walls, the water boiling through the broken walls, wasted. They sensed the waters on the other side of the barrier seeping onward, leaving sand unfilled. Within the nerves of their own bodies they felt the anticipated pangs of tendril roots searching down into the sand for water, and not finding it.

The urgency came upon them, all within the region, to remove this meteor; restore the canals as soon as the heat would permit. They began to gather, circling the meteor, circling the scorched ground around it. The urgency of getting at it before there was too much water lost drove them in upon the hot ground.

The unaccustomed heat held them back. They milled uncertainly, in increasing numbers, around the meteor.

SINCE Captain Griswold had not asked him to leave the control room during landing

operations, Berkeley still stood and watched the screen. At the first appearance of the Mars race emerging from the soil, he exclaimed in great excitement:

"There they are! There they are, Captain!"

Griswold came over and stood beside him, watching the screen. His eyes widened.

"Horrible," he muttered in revulsion. The gorge arose in his throat and stopped his speech for a moment. But history took possession of him again. "I suppose we will get accustomed to their appearance in time," he conceded.

"They're the builders, Captain. Wonderful!" Berkeley exulted. "Those shovel-shaped forelimbs—they're the builders!"

"Perhaps," Griswold agreed. "But in the way a mole or gopher—still, if they were intelligent enough to be trained for mining operations—but then you certainly cannot call these things intelligent, Mr. Berkeley."

"How do we know, Captain?"

But the Captain was looking about vainly for buildings, for factory smoke, for highways.

"Lieutenant Atkinson!" he called.

"Yes, sir."

"Send an immediate order throughout the ship. The Mars things are not to be molested." He glanced at Berkeley as he gave the order, and then glanced

away. "Double the complement of men on the landing party and see that they are fully armed." Then back to Berkeley, "A good leader guards against every contingency. But there will be no indiscriminate slaughter. You may be assured of that. I am as anxious as you that Man—"

"Thank you, Captain," Berkeley answered. "And the planting of the flag? The taking possession?"

"Well, now, Mr. Berkeley, what shall we do, now that we have seen some — things? Go away? Leave an entire planet of iron ore to be claimed later by Eastern Alliance? The enemy is not far behind us in their technology, Mr. Berkeley."

He warmed to his theme, his head came up, his shoulders back.

"Suppose these things are intelligent. Suppose they do have feelings of one kind or another. What would happen to them if the Eastern Alliance laid claim to this planet? Under us, at least, they will have protection. We will set aside reservations where they may live in peace. Obviously they live in burrows in the ground; I see no buildings. Their total food supply must be these miserable plants. What a miserable existence they have now!

"We will change that. We will provide them with adequate food, the food to fill their empty stom-

achs—if they have stomachs. We will clothe their repulsive nakedness. If they have enough sense to learn, we will give them the pride of self-employment in our mines and factories. We would be less than human, Mr. Berkeley, if we did not acknowledge our duty."

The light of noble intention shone in his face. He was swept away with his own eloquence.

"If," he finished, "we take care of the duty, the destiny will take care of itself!"

That was very good. He hoped they would have the grace to quote him on that. It was a fine summing up of his entire character.

Berkeley smiled a rueful smile. There was no stopping it. It was not a matter of not planting the flag, not taking possession. The captain was right. If not the Western Alliance, then certainly the Eastern Alliance. His quarrel was not with the captain nor with the duty, but with the destiny. The issue was not to be decided now. It had already been decided—decided when the first apeman had crept into the tree nest of another and stolen his mate.

Man takes. Whether it be by barbaric rapine, or reluctant acceptance of duty through carefully contrived diplomacy, Man takes.

Berkeley turned and made his way out of the control room.

OUTSIDE, the soil shifted in its contortions of cooling. The wind whispered dryly over the red landscape, sending up little swirls of dust, eternally shifting it from one place to another. The soil was less hot, and as it cooled, the Mars race pressed inward. Theirs was the urgency to get at this meteor as quickly as possible, remove it, start the water flowing once more.

"Observation reports ground cool enough for landing!" The magic words seemed to sing into the control cabin.

"Summon all landing party," Captain Griswold commanded immediately.

The signal bells rang throughout the ship. The bell in the supercargo cabin rang also. With the other scientists, Berkeley dressed in his protecting suit, fitted the clear glassite oxygen helmet over his head, fastened it. Together with the rest, he stood at the designated airlock to await the captain's coming.

And the captain did not keep them waiting. At precisely the right moment, with only a flicker of a side glance at the photographic equipment, the captain strode ahead of his officers to the airlock. The sealing doors of the corridor behind them closed,

shutting off the entire party, making the corridor itself into a great airlock.

There was a long sigh, and the great beams of the locks moved ponderously-against their weight. There was the rush of air from the corridor as the heavier pressure rushed out through the opening locks, to equalize with the thin air of Mars. With the air rushed outward fungus spores, virus, microbes; most of them to perish under the alien conditions, but some to survive—and thrive.

The red light above the lock was blinking on-off-on-off. The officers, the scientists, the armed men, watched the light intently. It blinked off for the last time. The locks were open. The great ramp settled to the ground.

IN ordered, military file, the captain at their head, the landing party passed down the corridor, through the locks, out upon the ramp beneath the blue-black sky; and down to the red soil. Captain Griswold was the first man to set foot on Mars, June 14, 2018. The photographers were second.

Now the Mars race was moving closer to the ship, but the ground was still too hot for their unprotected feet. The pressing need for removing the meteor possessed them. The movement of the men disembarking from the

ship was to them no more than another unintelligible aspect of this incredible meteor.

The sound of a bugle pierced the thin air, picked up by the loudspeaker from the ship, reverberating through their helmets. The landing party formed a semi-circle at the foot of the ramp.

Captain Griswold, his face as rigidly set as the marble statuary of him to follow, reached out and took the flag from Lieutenant Atkinson. He planted it firmly, without false motion, in the framework one of the men had set upon the baked ground to receive it.

He pointed to the north, the south, the east, the west. He brought his hands together, palms downward, arms fully outstretched in front of him. He spread his arms wide open and down, then back together and up; completing a circle which encompassed all the planet. He held out his right hand and received the scroll from Lieutenant Atkinson.

With a decisive gesture, not quite theatrical, he unfurled the scroll. He read in a voice firm enough to impress all posterity:

"By virtue of authority invested in me from the Supreme Council of the Western Alliance, the only true representatives of Earth and Man, I take possession of all this planet in the name of

our President, the Supreme Council, the Western Alliance, Earth, and in the name of God."

THE ground was cool enough now that their feet might bear it. The pain was great, but it was lost in the greater pain of feeling the killing obstruction the great meteor had brought to their canals. The Mars race began to press inward, inexorably.

It was in the anticlimactic moment, following the possession ceremony, when men milled around in uncertainty, that Lt. Atkinson saw the Mars race had come closer and were still moving.

"The monsters!" he exclaimed in horror. "They're attacking!"

Berkeley looked, and from the little gestures of movement out of his long training he deduced their true motive.

"Not against us!" he cried. "The ship."

Perhaps his words were more unfortunate than his silence might have been; for the ship was of greater concern to Captain Griswold than his own person.

"Halt!" Griswold shouted toward the approaching Mars race. "Halt or I'll fire!"

The Mars race paid no heed. Slowly they came forward, each step on the hot ground a torture, but a pain which could be borne. The greater torture, the one they could not bear, was the ache to

press against this meteor, push it away, that they might dig the puncture clean again. As a man whose breath is stopped fights frantically for air, concerned with nothing else, so they felt the desperation of drying sands.

They came on.

"For the last time," Griswold shouted, "halt!" He made a motion with his hands, as if to push them back, as if to convey his meaning by signs. Involuntarily, then, his eyes sought those of Berkeley. A look of pleading, helplessness. Berkeley met the glance and read the anxiety there, the tragic unwillingness of the man to arouse posterity's rage or contempt.

It was a brief glance only from both men and it was over. Captain Griswold's head came up; his shoulders straightened in the face of the oncoming monsters. They were close now, and coming closer. As always, the experts were free with their advice when it was not needed. When the chips were down, they could do no more than smirk and shrug a helpless shoulder.

He gave the command, and now there was no uncertainty.

"Fire!"

THE celebration was being held in the Great Stadium, the largest, most costly structure that Man had ever built. It was a fit-

ting structure for the more important football games; and used on occasion, if they could be fitted in without upsetting the schedule, for State affairs. Now the stadium was filled to capacity, its floor churned by the careless feet of the thousands upon thousands who had managed to obtain an entrance.

From the quarter-mile-high tiers of seats, from the floor of the stadium, the shouts welled up, washing over the platform at the North end.

"Griswold! Griswold!"

It was not yet time for history to assess the justice of the massacre.

The President raised his hand. The battery of video cameras picked up each move.

"Our hopes, our fears, our hearts, our prayers rode through every space-dark, star-flecked mile with these glorious pioneers." He turned then to the captain. "For the people of Earth, *Admiral* Griswold, this medal. A new medal for a Guider of Destiny, Maker of Empire, Son of Man!"

The voice faltered, stopped.

The crowd on the floor of the stadium was pressing outward from the center, screaming in pain and terror. At the moment when the people should be quiet, rapt in reverence, they were emptying the floor of the stadium.

But not willingly. They were being pressed back and out, as a great weight pushes its way through water. Those who could move outward no farther were crushed where they stood.

And then the ship appeared.

Hazy of outline, shimmering with impossible angles, seen by its glinting fire of light rather than by its solid form, as if its reality were in some other dimension and this only a projection, the ship appeared.

The President's hand reached out and gripped Griswold's shoulder as he leaned back and back, trying to determine its vast height. A silence then clutched the crowd—a terrified silence.

A full minute passed. Even on the platform, where all the pioneers of Mars were assembled with Earth's dignitaries, even there the people cowered back away from this unseetable, unknowable horror.

But one man leaned forward instead, frantically studying the shimmering outline of the ship. One man—Berkeley.

With the training of the ethnologist, a man who really can deduce an entire civilization from mystifying data, he recognized the tremendous import.

At the end of that minute, without warning, a group of figures hovered in the air near the floor of the stadium.

QUICKLY, Berkeley's eyes assessed their form, their color, the increasing solidity of the humanoids. There are some movements, some gestures, common to all things of intelligence—the pause, the resolution, the lift of pride.

"No!" he screamed and started forward. "Oh, no! We're civilized. We're intelligent!" He was pulled back, as in his terror he tried to leap from the platform to get at the humanoids.

Held there, unable to move, he read the meaning of the actions of the group hovering near the ship. One flashed a shining tentacle around, as if to point to the stadium, the pitifully small spaceship on display, the crowds of people.

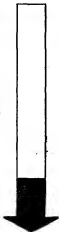
The leader manifestly ignored him. He flowed forward a pace, his ovoid head held high in pride and arrogance. He pointed a tentacle toward the south end of the stadium, and a pillar of leaping flame arose; fed with no fuel, never to cease its fire, the symbol of possession.

He pointed his tentacles to the north, the south, the east, the west. He motioned with his tentacles, as if to encircle all of Earth.

He unfurled a scroll and began to read.

—MARK CLIFTON &
ALEX APOSTOLIDES

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For Your Information

By WILLY LEY

Scientific Journey

GRAB yourself a botanist from the region of the Iron Curtain—either side of it. Fly him some 8000 miles along a Great Circle route, timing your arrival to coincide with daybreak. Then parachute him to the ground, after having made sure first that there is no road



sign, no store front, no advertising of any kind and in general no scrap of reading matter for miles around—and also nobody who could answer a question. Instruct your botanist that he'll be picked up just as soon as he convinces you by radio that he has identified his location; general terms like "the Kalahari desert" or "Java" will be acceptable.

The very first thing your botanist is likely to see will make him believe that the task is an easy one . . . a road, lined on both sides, as far as the eye can reach, with eucalyptus trees. There are also small groves of eucalyptus off the road; in fact, three or four different varieties can be found within easy walking distance. Now, eucalyptus is as typically Australian as the platypus—but what may cause our botanist some dismay is that clumps of bamboo nestle between and near some of the tall trees. Seeing these, he will probably wish that he had read something on the flora of Australia more recently than at the time he took his degree. The climate of northern Australia, of course, is such that bamboo can grow there—but does it? Possibly it has been introduced by Whites, or by the Chinese who can't live without bamboo—but once you start considering artificial introduction, you have to be twice as careful.

Walking along, our botanist will see something that is also very typical . . . of a landscape half way around the planet from Australia. There are half a dozen century plants, growing close to each other. Their place of origin is, of course, the southwestern part of the North American continent. Eucalyptus and century plants cannot occur together without the intervention of Man, our botanist thinks. Therefore, one has been introduced. He notes that the century plants are in the minority by far.

AT the turn of the road, the landscape suddenly changes. There is a big grove of lemon trees, which normally would point



to the Mediterranean—but this is a plantation. And beyond the plantation of comparatively small lemon trees, there are the heavy green-and-gold fountain sprays of date palms, scores and scores of them. This, of course, should indicate the general region of Arabia, Turkey, Palestine or North East Africa—but high above the date palms stretch lofty Royal palms, and other slender stems in the distance might well be coconut palms.

Nearby, three banana plants rise from a clump of short bamboo, but the fleeting impression of Central America—the climate doesn't feel right either—is destroyed by a row of still another kind of palms. These startle the European botanist for a moment. They certainly aren't date, nor are they the Royal Palm, even though at first glance they bear some slight resemblance to each. Searching back through his memory, he may conclude that they are the type called Washingtonias; trouble is, he has specialized in the flora of the northern tundra. If there were only something he could be sure of . . .

Here is a stand of pines. From a distance, they look somewhat like poor specimens of the European *Pinus sylvestris*; and the resemblance holds in some respects even when they are seen close by. Still, there are pro-

nounced differences—and not far from that stand of pines, sheltered by two big eucalyptus trees and flanked by several century plants, there grows a tree fern!

By this time, the botanist is either ready to weep or is already doing so because of the hopelessly tangled botanical mess around him. So we may as well take pity on him and tell him where he is:

San Diego County, in California.

No, I do not seriously advocate kidnapping botanists from the Iron Curtain area and flying them non-stop to San Diego; these were just some idle thoughts that crossed my mind as Chesley Bonestell drove me through this complex landscape on the road from San Diego to Palomar Mountain.

What got me going was the fact that the plants which really belong there are around, but in a minority. The only native plant which appeared in any quantity was the Torrey pine, which does not grow elsewhere but which also requires specialized knowledge (or experience) to label properly. Practically all of the rest—the easily identified plants which greet the eye everywhere—are imports. The half-dozen varieties of eucalyptus are there because somebody in California once thought that eucalyptus was a

valuable timber tree, whereas actually its wood is not good for building, is poor for furniture and not even good for firewood. The millions of date palms were planted for obvious reasons, not primarily to provide Hollywood with Arab settings. The lemon and orange groves do not really require explanation—but they dominate the landscape.

WHAT happened to me is that I spent all of March on the road, if that phrase can be used with reference to a trip which was made exclusively by air. On the flight home from Denver (where I merely changed airlines) I added it up: the total was around 11,000 miles. It was a lecture tour—several cities in Oklahoma and eastern Texas, then El Paso (no time for a side trip to the White Sands Proving Ground, unfortunately), then Pasadena, and after that home to New York, with lecture stopovers in Utah and Wyoming. I have spoken with other people who have gone on such tours and they often used terms like a "grind," or "hard work" and so forth. I don't deny that it is hard work, but it was certainly not a "grind"—I found something interesting to see wherever I went.

One night professor Dr. Hubertus Strughold, the head of the Air Force's Department of Space

Medicine, drove me around. There were clumps of opuntias growing along the roadside, and he told me how local farmers, using surplus flame throwers, burn the spines of the plants, while their cattle wait eagerly behind them "as if those things were baked apples." Strughold did not tell this as a simple fact; it was somewhat more of a complaint—for he had told the story at a party in Washington, and somebody had remarked skeptically that "Dr. Strughold has the most unusual ideas of what can be done." It was not until *Life* magazine ran a picture-spread on this practice that he was believed.

This conversation took place while we went to see Dr. Ulrich C. Luft, former member of a Mt. Everest expedition and expert on medical problems of high altitude aviation. We were still talking about it when Dr. Luft's son brought in a bucket of fossils which they had found while gardening. Question: "What are they?"

For once I was lucky. Even without any reference books, I could see that they were the shells of ammonites, shelled octopi which were quite common in the seas of the Jurassic and Cretaceous periods. Judging from the locality I could be even more specific: ammonites from the

Niobrara sea of the Upper Cretaceous. I don't know the opinion of the local chamber of commerce, but to me San Ant6n is the place where I had to classify a bucketful of fossils without preparation or warning.

Likewise, El Paso is not merely the airport nearest the White Sands Proving Ground, but the city where three unexpected events happened all in one day. One of them was that I unexpectedly met Clyde Tombaugh, the discoverer of Pluto, who had come to my lecture. The second was that I saw my first genuine western dust storm—I know they're not rare, but I had never been in one before. My companions were somewhat unhappy about it, because they had wanted to show me their city from a lookout point—and if it had been my fifth or sixth dust storm, I suppose I might have felt the same way. As it was, I welcomed it, as I did my first earthquake twelve years ago (Bob Heinlein still claims that he arranged it for me).

The third unexpected event had actually preceded the dust storm; I had been informed in the morning that a visit to Fort Bliss would be welcomed and that the commanding officer, General Mickelsen, had set some time aside for me. Then I was informed that a number of their

"graduates" were assembled in the basement of building such-and-such, and that it would be appreciated if I spoke to them.

On the way over, I tried to think of something that the "graduates" of Fort Bliss might not know about rockets or missiles.

WHEN I got there my problem was still unsolved. But, leaning against a Nike missile, I saw the pumping unit of a V-2, and then I had something to tell. The only danger left was that Werner von Braun, from whom I had the story, had told it to these people also.

In a small liquid fuel rocket, as most of the readers of GALAXY Science Fiction are apt to know, you can feed the rocket motor by simply pressurizing the two tanks holding the fuel and the oxidizer. Of course, fairly strong tanks are required to withstand a pressurization of some 250 pounds per square inch, but in a small rocket this does not constitute much of a problem. As the rocket grows in overall size, however, a considerable weight penalty begins to creep in if you continue pressurizing the tanks; and once the rocket has a take-off weight of, say, a ton or more, you have to pump the fuel. Then the tanks can be comparatively light, since they hold the fuel in the same

manner as the fuel tanks in cars and planes, while the job of force feeding the motor is done by the pumps. It was at the time when the Peenemünde Institute was doing preliminary work on the V-2 that the pump problem came up in earnest.

Wernher von Braun first assigned a man to make a general study about pumps; the man came up with the reply that there didn't seem to be anything which spoke very strongly either in favor or against piston pumps or centrifugal pumps and that the choice would depend on the "status of the art"—the actual accomplishments of pump builders.

A conference with a manufacturer was set up, and von Braun arrived with some preliminary specifications, convinced that at one point or another the engineers would tell him that this or that "simply couldn't be done." He began by telling them that he needed two pumps, each of which would have to handle some 150 pounds of liquid per second.

This was greeted by a respectful silence.

He continued that the low pressure end would be just about 16 lbs. per square inch, while the high pressure end would have to deliver some 320 lbs. per second. Still silence.

Then he added that the pres-

sure at the high pressure end would have to be kept within a fraction of one per cent of the value.

Still silence.

It was necessary, furthermore, he explained, that the pump should not need more than a very few seconds from standstill to full delivery pressure. And since nobody had yet said that all this was impossible, he concluded by pointing out that these pumps must be capable of being stored for many months, yet at any time must be ready for instant use.

Whereupon one of the pump engineers said that all this simply amounted to a plain, everyday firefighters' pump.

Such a pump has to have high delivery pressure, because the firefighter has to shoot the water jet over a considerable distance. The pressure must be very steady; otherwise the fireman wouldn't aim properly. And since fires happen relatively infrequently and at unpredictable moments, the equipment obviously must function perfectly after long storage and reach full delivery pressure swiftly, since in fire fighting seconds may count.

The moral of the story is, of course, that if you build a spaceship and need a synchronized double hyperframmiss, don't sit down and design it . . . it might be in use in the biscuit industry.

PHOENIX, Arizona, is "in the valley of the sun," and is a prime tourist attraction. Everybody is greatly surprised to learn that you came there on business. But, as usual, I learned a few things.

It was one of the rare times in my life when I got a naked-eye view of the planet Mercury. In fact, there was quite a nice astronomical display: Venus was brilliant in the evening sky (the telescope proved her to be in the phase which is called *luna fallax* when applied to the moon); Jupiter was higher up, and Mars off to one side of Venus.

But what was more interesting to me was the collection of bells at the college in Tempe, Arizona.

Ranchers and farmers continually find them, and when they see that there are two stars on one side and the letters U.S. on the other, they assume that the bells are government property and turn them in to the college—which doesn't bother to pass them on, because the government doesn't care anymore.

The bells are camel bells.

Shortly before the Civil War, a number of people reasoned as follows: "We are now conquering the West. The area between present-day forts and present-day and future settlements is mostly desert. In North Africa, no animal is as useful in the

desert as the camel. Hence camels will be useful in the West."

U. S. officers were sent to Egypt to buy camels and import camel drivers. Camels were bred in this country and sent West. There were the beginnings of a U. S. camel cavalry—but then things began to go wrong. The Civil War came along and interrupted proceedings; also, it turned out that while the camel's feet are admirably suited to the sandy deserts of Africa and Arabia, they do not stand up well in the stony deserts of our West.

For a while camels did industrial load carrying. A number escaped; others were set free by disappointed owners, who turned to horses and burros instead. There were wild camels for a short time, but they made themselves quite obnoxious—no difficulty at all for a camel—and were shot.

Only two things remain of this episode—the bells, with the letters U.S.; and rumors that offspring of those camels still roam the western deserts. The scientists at Tempe are certain that no camels roam in their vicinity; but they concede that possibility for the areas bordering Mexico, where there are sandy deserts.

Speaking about the difference in the deserts: you can't grow the desert plants of Africa in the Arizona desert—the sun will kill

them off. This, at least, is the experience of the experts in the fabulous Desert Botanical Garden near Phoenix.

When I got there—my hostess at the Hudson Lodge had insisted this was something I had to see—I was puzzled by a metal structure. It did not look reasonable, being merely a skeleton of angle iron supporting a lot of parallel metal slats. It certainly would not keep out the rain (if that was the intention), and the plants growing there did not look as though they needed anything to hold onto while climbing. In fact, they didn't look as if they could climb, even if you promised them fertilizer. Well, as old Dr. W. Taylor Marshall explained, it was supposed to do something entirely different—namely to provide a diffused shade for his collection of African desert plants.

IT was also Dr. Marshall who told me a large number of facts about the giant saguaro cacti, which is the way they spell the name in Arizona—in botanical handbooks, the spelling *sahuaro* seems to be preferred. In Europe, they are known as "pillar cacti," which I consider a nice descriptive term. The botanical name is *Cereus giganteus*.

Easterners who see them for the first time in their natural

habitat often wonder whether the plant is still alive. There it stands, stiff and inflexible, dusty and dry in the desert. Many of them are covered with holes, about an inch across, made by woodpeckers. After the woodpeckers leave, a tiny sparrow-sized bird, the elf owl, takes over the hole.

Those saguaros are among the slowest-growing plants. Dr. Marshall has a collection labeled by age—5, 10, 15, 20 years and so on—all of which you could keep on your desk in pots so far as size goes—a 40-year-old specimen was barely higher than my knee. But those that grew outside were more than, ten feet tall; they count a century of growth for every six feet.

When they are very young, the sun is their enemy, for a one-year-old saguaro, being about the size of a pea, can grow only in the shade of a bush. Fifty years later, the bush is gone, and yet the cactus is still very young, but strong enough to live in direct sunlight.

They don't have a tap root, but a horizontal root system which, in an old and massive specimen, may cover a circular area sixty feet in diameter. When it rains, they can absorb water at a rate which is not rivaled by any plant on earth; and they are built accordingly. When you look at them, with their vertical

ridges, you visualize a wooden skeleton something like that of an airliner's fuselage: long stringers held in place by circular members. Well, it is somewhat like that—the long stringers, vertical in this case, are there. But they join at irregular intervals, and each joint is between two "stringers" only; there are no circular members; the plant can expand *fast* when there is a chance of getting water.

When you see a picture of a saguaro, you usually recognize it by its odd branches; but every once in a while you find one which really looks like a pillar. I wasn't there long enough to see one in person, but I was shown a photograph of a 14-foot straight and unbranched specimen, which had grown up in a sheltered spot. According to Dr. Marshall, this would be the norm if they were all sheltered — the branching merely serves to balance the plant. They have 60-mile winds on occasion, and since *Cereus giganteus* does not have a tap root, such a wind often forces it out of plumb. Then it simply grows a branch to stabilize itself. It is not known just how this works — Dr. Strughold, with whom I discussed this later, guessed that it might be the tensed tissue. At any event, the branch does not stop growing when it is large enough and heavy enough to

serve the purpose of balancing—it keeps growing, overbalancing the whole in the other direction, and so a new branch has to form to counteract the first. Dr. Marshall told me that he did not feel certain whether he should accept this explanation, and took a straight saguaro cactus, planting it at an angle.

It branched . . .

I can't leave off without telling the best remark I heard during the whole trip. The scene: a restaurant at the San Diego waterfront, at dinner time. The participants: two scientists from the Scripps Oceanographic Institute at La Jolla, California, Chesley Bonestell and myself. The topic of discussion: oceanographic expeditions—in particular, the last one of the Scripps Institute.

"Yes," said Dr. Hamilton, talking about the expedition: "they went to the Marquesas, and to the Tonga islands. They made a side trip to Samoa, and then went to Oahu. And then they came home to La Jolla and demanded a vacation!"

—WILLY LEY

ANY QUESTIONS?

I am annoyed by the nonsense of "weightlessness." Far out in space, if we could get there, maybe, but why should something be

weightless close to Earth? Recently some scientists have even said that one could be weightless in the atmosphere. If rockets got to be weightless, they would fly off into space and not fall back.

Charles D. Collins
15203 Fairway Dr.
Santa Maria, Calif.

It is evident that you think "weightlessness" means that the body which is weightless is outside any gravitational field, specifically that of the Earth. Just because Jules Verne and H. G. Wells indulged in muddled and inconclusive thinking about the actions of gravity, this does not have to go on forever.

Let's try to clear up the problem by first stating what "weight" is. The definition which should be taught in school (but isn't, as I well know) is that weight is the result of fighting or impeding the pull of gravity.

As I sit here in front of my typewriter, my body cannot follow the pull of gravity. It is supported by a chair, the chair is kept from following the pull of gravity by the floor, the floor is, in turn, supported by the ground. The result is that I am prevented from falling, which gives the sensation of weight. If I were not prevented from falling—in other words, if I

could follow the pull of gravity freely—I would not feel any weight.

Therefore: a rocket which falls back from its peak altitude of, say, 110 miles is under the influence of gravity, all right, but weightless since nothing impedes its fall until it enters the denser layers of the atmosphere.

Recently I heard a scientist say that a body could be weightless and still have its full inertia. Did I understand this correctly and if I did, how can this be?

W. A. Robertson
2233 Canyon Drive
Santa Monica, Calif.

First, please read my reply to Mr. Collins as to the definition of weight. But whether weightlessness occurs inside a gravitational field, near a space station, for example, or so far from any gravitational field that it is due simply to the absence of gravitation, the inertia of a moving body is not changed.

This can be realized best by looking at the formula for the inertia (more precisely the kinetic energy) of a body. It reads $m/2$ times v^2 ; you multiply half of its mass by the square of its velocity.

No factor which has anything to do with a gravitational field

appears in this formula. It is merely a question of the body's mass and its velocity. While the concept of something as massive as an iron ball, without weight but with all its inertia, might be strange at first glance, it is nevertheless correct.

The question voted among us as "the question we'd most like Ley to discuss" is the following: What is the basis of Einstein's Theory of Relativity?

*Martin Evans, Pres.
Miami Beach S.F. Club
1329 Penn Ave.
Miami Beach 39, Fla.*

This is a hard question indeed, partly because of the subject matter, partly because different people are likely to have different opinions as to what they regard as the most important tenet; the tendency then being to regard this as the "basic" idea.

One man may quote Minkowski's statement "space in itself and time in itself sink to mere shadows and only a kind of union of the two retains an independent existence" and consider the concept of space-time the "basis." Another man may feel that the elimination of the "ether" and the explanation of gravity as a kind of "illusion" is the most important. Still others might insist, with

much justification, that the "basic" thoughts are those which got Einstein started; like the "contraction" of George Francis FitzGerald, published by him in 1892 and, about half a year later, by Hendrick Antoon Lorentz, and now usually called the Lorentz-FitzGerald contraction. Or the concept of the velocity of light as the limiting velocity, first published by Jules Henri Poincaré in 1904, a full year before Einstein announced his.

Poincaré stated *le principe de la relativité* by saying that the laws of physical phenomena must be the same both for a fixed and a uniformly moving observer, so that the observer himself cannot possibly tell whether he is in motion or not. Then he continued that this required *une mécanique entièrement nouvelle, qui serait surtout caractérisée par ce fait qu'aucune vitesse ne pouvait dépasser celle de la lumière.*

In English: "an entirely new concept which, above all, is characterized by the fact that no speed can surpass that of light."

Any one of the concepts mentioned may be considered "the basis," but I think that most physicists might agree that Poincaré's enunciation of the principles is "it."



TIME TRAVELER-1953

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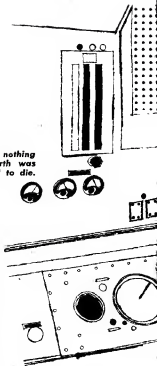
By ROBERT SHECKLEY

He said he wasn't immortal—but nothing could kill him. Still, if the Earth was to live as a free world, he had to die.

Illustrated by ASHMAN

“COME right in, gentlemen,” the Ambassador waved them into the very special suite the State Department had given him. “Please be seated.”

Colonel Cerey accepted a chair, trying to size up the individual who had all Washington chewing its fingernails. The Ambassador hardly looked like a menace. He was of medium height and slight build, dressed in a conservative brown tweed suit that the State Department had given him. His





face was intelligent, finely molded and aloof.

As human as a human, Cercy thought, studying the alien with bleak, impersonal eyes.

"How may I serve you?" the Ambassador asked, smiling.

"The President has put me in charge of your case," Cercy said. "I've studied Professor Darrig's reports—" he nodded at the scientist beside him—"but I'd like to hear the whole thing for myself."

"Of course," the alien said, lighting a cigarette. He seemed genuinely pleased to be asked; which was interesting. Cercy thought. In the week since he had landed, every important scientist in the country had been at him.

But in a pinch they call the Army, Cercy reminded himself. He settled back in his chair, both hands jammed carelessly in his pockets. His right hand was resting on the butt of a .45, the safety off.

"I HAVE come," the alien said, "as an ambassador-at-large, representing an empire that stretches half-way across the Galaxy. I wish to extend the welcome of my people and to invite you to join our organization."

"I see," Cercy replied. "Some of the scientists got the impression that participation was compulsory."

"You will join," the Ambassador said, blowing smoke through his nostrils.

Cercy could see Darrig stiffen in his chair and bite his lip. Cercy moved the automatic to a position where he could draw it easily. "How did you find us?" he asked.

"We ambassadors-at-large are each assigned an unexplored section of space," the alien said. "We examine each star-system in that region for planets, and each planet for intelligent life. Intelligent life is rare in the Galaxy, you know."

Cercy nodded, although he hadn't been aware of the fact.

"When we find such a planet, we land, as I did, and prepare the inhabitants for their part in our organization."

"How will your people know that you have found intelligent life?" Cercy asked.

"There is a sending mechanism that is part of our structure," the Ambassador answered. "It is triggered when we reach an inhabited planet. This signal is beamed continually into space, to an effective range of several thousand light-years. Follow-up crews are continually sweeping through the limits of the reception area of each Ambassador, listening for such messages. Detecting one, a colonizing team follows it to the planet."

He tapped his cigarette delicately on the edge of an ash tray. "This method has definite advantages over sending combined colonization and exploration teams obviously. It avoids the necessity of equipping large forces for what may be decades of searching."

"Sure." Cercy's face was expressionless. "Would you tell me more about this message?"

"There isn't much more you need know. The beam is not detectable by your methods and, therefore, cannot be jammed. The message continues as long as I am alive."

DARRIG drew in his breath sharply, glancing at Cercy.

"If you stopped broadcasting," Cercy said casually, "our planet would never be found."

"Not until this section of space was resurveyed," the diplomat agreed.

"Very well. As a duly appointed representative of the President of the United States, I ask you to stop transmitting. We don't choose to become part of your empire."

"I'm sorry," the Ambassador said. He shrugged his shoulders easily. Cercy wondered how many times he had played this scene on how many other planets.

"There's really nothing I can do." He stood up.

"Then you won't stop?"

"I can't. I have no control over the sending, once it's activated." The diplomat turned and walked to the window. "However, I have prepared a philosophy for you. It is my duty, as your Ambassador, to ease the shock of transition as much as possible. This philosophy will make it instantly apparent that—"

As the Ambassador reached the window, Cercy's gun was out of his pocket and roaring. He squeezed six rounds in almost a single explosion, aiming at the Ambassador's head and back. Then an uncontrollable shudder ran through him.

The Ambassador was no longer there!

CERCY and Darrig stared at each other. Darrig muttered something about ghosts. Then, just as suddenly, the Ambassador was back.

"You didn't think," he said, "that it would be as easy as all that, did you? We Ambassadors have, necessarily, a certain diplomatic immunity." He fingered one of the bullet holes in the wall. "In case you don't understand, let me put it this way. It is not in your power to kill me. You couldn't even understand the nature of my defense."

He looked at them, and in that moment Cercy felt the Amba-

sador's complete alienness.

"Good day, gentlemen," he said.

Darrig and Cercy walked silently back to the control room. Neither had really expected that the Ambassador would be killed so easily, but it had still been a shock when the slugs had failed.

"I suppose you saw it all, Malley?" Cercy asked, when he reached the control room.

The thin, balding psychiatrist nodded sadly. "Got it on film, too."

"I wonder what his philosophy is," Darrig mused, half to himself.

"It was illogical to expect it would work. No race would send an ambassador with a message like that and expect him to live through it. Unless—"

"Unless what?"

"Unless he had a pretty effective defense," the psychiatrist finished unhappily.

Cercy walked across the room and looked at the video panel. The Ambassador's suite was very special. It had been hurriedly constructed two days after he had landed and delivered his message: The suite was steel and lead lined, filled with video and movie cameras, recorders, and a variety of other things.

It was the last word in elaborate death cells.

In the screen, Cercy could see the Ambassador sitting at a table.

He was typing on a little portable the Government had given him.

"Hey, Harrison!" Cercy called. "Might as well go ahead with Plan Two."

Harrison came out of a side room where he had been examining the circuits leading to the Ambassador's suite. Methodically he checked his pressure gauges, set the controls and looked at Cercy. "Now?" he asked.

"Now," Cercy watched the screen. The Ambassador was still typing.

Suddenly, as Harrison sent home the switch, the room was engulfed in flames. Fire blasted out of concealed holes in the walls, poured from the ceiling and floor.

In a moment, the room was like the inside of a blast furnace.

Cercy let it burn for two minutes, then motioned Harrison to cut the switch. They stared at the roasted room.

They were looking, hopefully, for a charred corpse.

But the Ambassador reappeared beside his desk, looking ruefully at the charred typewriter. He was completely unscathed.

"Could you get me another typewriter?" he asked, looking directly at one of the hidden projectors. "I'm setting down philosophy for you ungrateful wretches."

He seated himself in the wreckage of an armchair. In a moment, he was apparently asleep.

"ALL right, everyone grab a seat," Cercy said. "Time for a council of war."

Malley straddled a chair backward. Harrison lighted a pipe as he sat down, slowly puffing it into life.

"Now, then," Cercy said. "The Government has dropped this squarely in our laps. We have to kill the Ambassador—obviously. I've been put in charge." Cercy grinned with regret. "Probably because no one higher up wants the responsibility of failure. And I've selected you three as my staff. We can have anything we want, any assistance or advice we need. All right. Any ideas?"

"How about Plan Three?" Harrison asked.

"We'll get to that," Cercy said. "But I don't believe it's going to work."

"I don't either," Darrig agreed. "We don't even know the nature of his defense."

"That's the first order of business. Malley, take all our data so far, and get someone to feed it into the Derichman Analyzer. You know the stuff we want. What properties has X, if X can do thus and thus?"

"Right," Malley said. He left, muttering something about the

ascendancy of the physical sciences.

"Harrison," Cercy asked, "is Plan Three set up?"

"Sure."

"Give it a try."

While Harrison was making his last adjustments, Cercy watched Darrig. The plump little physicist was staring thoughtfully into space, muttering to himself. Cercy hoped he would come up with something. He was expecting great things of Darrig.

Knowing the impossibility of working with great numbers of people, Cercy had picked his staff with care. Quality was what he wanted.

With that in mind, he had chosen Harrison first. The stocky, sour-faced engineer had a reputation for being able to build anything, given half an idea of how it worked.

Cercy had selected Malley, the psychiatrist, because he wasn't sure that killing the Ambassador was going to be a purely physical problem.

Darrig was a mathematical physicist, but his restless, curious mind had come up with some interesting theories in other fields. He was the only one of the four who was really interested in the Ambassador as an intellectual problem.

"He's like Metal Old Man," Darrig said finally.

"What's that?"

"Haven't you ever heard the story of Metal Old Man? Well, he was a monster covered with black metal armor. He was met by Monster-Slayer, an Apache culture hero. Monster-Slayer, after many attempts, finally killed Metal Old Man."

"How did he do it?"

"Shot him in the armpit. He didn't have any armor there."

"Fine," Cercy grinned. "Ask our Ambassador to raise 'his arm."

"All set!" Harrison called.

"Fine. Go."

In the Ambassador's room, an invisible spray of gamma rays silently began to flood the room with deadly radiation.

But there was no Ambassador to receive them.

"That's enough," Cercy said, after a while. "That would kill a herd of elephants."

But the Ambassador stayed invisible for five hours, until some of the radioactivity had abated. Then he appeared again.

"I'm still waiting for that typewriter," he said.

"**H**ERE'S the Analyzer's report," Malley handed Cercy a sheaf of papers. "This is the final formulation, boiled down."

Cercy read it aloud: "The simplest defense against any and all weapons, is to become each par-

ticular weapon."

"Great," Harrison said. "What does it mean?"

"It means," Darrig explained, "that when we attack the Ambassador with fire, he turns into fire. Shoot at him, and he turns into a bullet—until the menace is gone, and then he changes back again." He took the papers out of Cercy's hand and rifled through them.

"Humm. Wonder if there's any historical parallel? Don't suppose so." He raised his head. "Although this isn't conclusive, it seems logical enough. Any other defense would involve recognition of the weapon first, then an appraisal, then a countermove predicated on the potentialities of the weapon. The Ambassador's defense would be a lot faster and safer. He wouldn't have to recognize the weapon. I suppose his body simply identifies, in some way, with the menace at hand."

"Did the Analyzer say there was any way of breaking this defense?" Cercy asked.

"The Analyzer stated definitely that there was no way, if the premise were true," Malley answered gloomily.

"We can discard that judgment," Darrig said. "The machine is limited."

"But we still haven't got any way of stopping him," Malley pointed out. "And he's still broad-

casting that beam."

Cercy thought for a moment. "Call in every expert you can find. We're going to throw the book at the Ambassador. I know," he said, looking at Darrig's dubious expression, "but we have to try."

DURING the next few days, every combination and permutation of death was thrown at the Ambassador. He was showered with weapons, ranging from Stone-Age axes to modern high-powered rifles, peppered with hand grenades, drowned in acid, suffocated in poison gas.

He kept shrugging his shoulders philosophically, and continued to work on the new typewriter they had given him.

Bacteria was piped in, first the known germ diseases, then mutated species.

The diplomat didn't even sneeze.

He was showered with electricity, radiation, wooden weapons, iron weapons, copper weapons, brass weapons, uranium weapons—anything and everything, just to cover all possibilities.

He didn't suffer a scratch, but his room looked as though a bar-room brawl had been going on in it continually for fifty years.

Malley was working on an idea of his own, as was Darrig. The

physicist interrupted himself long enough to remind Cercy of the Baldur myth. Baldur had been showered with every kind of weapon and remained unscathed, because everything on Earth had promised to love him. Everything, except the mistletoe. When a little twig of it was shot at him, he died.

Cercy turned away impatiently, but had an order of mistletoe sent up, just in case.

It was, at least, no less effective than the explosive shells or the bow and arrow. It did nothing except lend an oddly festive air to the battered room.

After a week of this, they moved the unprotesting Ambassador into a newer, bigger, stronger death cell. They were unable to venture into his old one because of the radioactivity and micro-organisms.

The Ambassador went back to work at his typewriter. All his previous attempts had been burned, torn or eaten away.

"Let's go talk to him," Darrig suggested, after another day had passed. Cercy agreed. For the moment, they were out of ideas.

"COME right in, gentlemen," the Ambassador said, so cheerfully that Cercy felt sick. "I'm sorry I can't offer you anything. Through an oversight, I haven't been given any food or

water for about ten days. Not that it matters, of course."

"Glad to hear it," Cercy said. The Ambassador hardly looked as if he had been facing all the violence Earth had to offer. On the contrary, Cercy and his men looked as though they had been under bombardment.

"You've got quite a defense there," Malley said conversationally.

"Glad you like it."

"Would you mind telling us how it works?" Darrig asked innocently.

"Don't you know?"

"We think so. You become what is attacking you. Is that right?"

"Certainly," the Ambassador said. "You see, I have no secrets from you."

"Is there anything we can give you," Cercy asked, "to get you to turn off that signal?"

"A bribe?"

"Sure," Cercy said. "Anything you—?"

"Nothing," the Ambassador replied.

"Look, be reasonable," Harrison said. "You don't want to cause a war, do you? Earth is united now. We're arming—"

"With what?"

"Atom bombs," Malley answered him. "Hydrogen bombs. We're—"

"Drop one on me," the Am-

bassador said. "It wouldn't kill me. What makes you think it will have any effect on my people?"

THE four men were silent. Somehow, they hadn't thought of that.

"A people's ability to make war," the Ambassador stated, "is a measure of the status of their civilization. Stage one is the use of simple physical extensions. Stage two is control at the molecular level. You are on the threshold of stage three, although still far from mastery of atomic and subatomic forces." He smiled ingratiatingly. "My people are reaching the limits of stage five."

"What would that be?" Darrig asked.

"You'll find out," the Ambassador said. "But perhaps you've wondered if my powers are typical? I don't mind telling you that they're not. In order for me to do my job and nothing more, I have certain built-in restrictions, making me capable only of passive action."

"Why?" Darrig asked.

"For obvious reasons. If I were to take positive action in a moment of anger, I might destroy your entire planet."

"Do you expect us to believe that?" Cercy asked.

"Why not? Is it so hard to understand? Can't you believe that

there are forces you know nothing about? And there is another reason for my passiveness. Certainly by this time you've deduced it?"

"To break our spirit, I suppose," Cercy said.

"Exactly. My telling you won't make any difference, either. The pattern is always the same. An Ambassador lands and delivers his message to a high-spirited, wild young race like yours. There is frenzied resistance against him, spasmodic attempts to kill him. After all these fail, the people are usually quite crestfallen. When the colonization team arrives, their indoctrination goes along just that much faster." He paused, then said, "Most planets are more interested in the philosophy I have to offer. I assure you, it will make the transition far easier."

He held out a sheaf of type-written pages. "Won't you at least look through it?"

Darrig accepted the papers and put them in his pocket. "When I get time."

"I suggest you give it a try," the Ambassador said. "You must be near the crisis point now. Why not give it up?"

"Not yet," Cercy replied tonelessly.

"Don't forget to read the philosophy," the Ambassador urged them.

The men hurried from the room.

"**N**OW look," Malley said, once they were back in the control room. "there are a few things we haven't tried. How about utilizing psychology?"

"Anything you like," Cercy agreed, "including black magic. What did you have in mind?"

"The way I see it," Malley answered, "the Ambassador is geared to respond, instantaneously, to any threat. He must have an all-or-nothing defensive reflex. I suggest first that we try something that won't trigger that reflex."

"Like what?" Cercy asked.

"Hypnotism. Perhaps we can find out something."

"Sure," Cercy said. "Try it. Try anything."

Cercy, Malley and Darrig gathered around the video screen as an infinitesimal amount of a light hypnotic gas was admitted into the Ambassador's room. At the same time, a bolt of electricity lashed into the chair where the Ambassador was sitting.

"That was to distract him," Malley explained. The Ambassador vanished before the electricity struck him, and then appeared again, curled up in his armchair.

"That's enough," Malley whispered, and shut the valve. They watched. After a while, the Am-

ambassador put down his book and stared into the distance.

"How strange," he said. "Alfern dead. Good friend . . . just a freak accident. He ran into it, out there. Didn't have a chance. But it doesn't happen often."

"He's thinking out loud," Malley whispered, although there was no possibility of the Ambassador's hearing them. "Vocalizing his thoughts. His friend must have been on his mind for some time."

"Of course," the Ambassador went on, "Alfern had to die sometime. No immortality—yet. But that way—no defense. Out there in space they just pop up. Always there, underneath, just waiting for a chance to boil out."

"His body isn't reacting to the hypnotic as a menace yet," Cercy whispered.

"Well," the Ambassador told himself, "the regularizing principle has been doing pretty well, keeping it all down, smoothing out the inconsistencies—"

Suddenly he leaped to his feet, his face pale for a moment, as he obviously tried to remember what he had said. Then he laughed.

"Clever. That's the first time that particular trick has been played on me, and the last time. But, gentlemen, it didn't do you any good. I don't know, myself, how to go about killing me." He laughed at the blank walls.

"Besides," he continued, "the

colonizing team must have the direction now. They'll find you with or without me."

He sat down again, smiling.

"**T**HAT does it!" Darrig cried. "He's not invulnerable. Something killed his friend Alfern."

"Something out in space," Cercy reminded him. "I wonder what it was."

"Let me see," Darrig reflected aloud. "The regularizing principle. That must be a natural law we knew nothing about. And underneath—what would be underneath?"

"He said the colonization team would find us anyhow," Malley reminded them.

"First things first," Cercy said. "He might have been bluffing us . . . no, I don't suppose so. We still have to get the Ambassador out of the way."

"I think I know what is underneath!" Darrig exclaimed. "This is wonderful. A new cosmology, perhaps."

"What is it?" Cercy asked. "Anything we can use?"

"I think so. But let me work it out. I think I'll go back to my hotel. I have some books there I want to check, and I don't want to be disturbed for a few hours."

"All right," Cercy agreed. "But what—?"

"No, no, I could be wrong,"



Darrig^{*} said. "Let me work it out." He hurried from the room.

"What do you think he's driving at?" Malley asked.

"Beats me," Cerey shrugged. "Come on, let's try some more of that psychological stuff."

First they filled the Ambassador's room with several feet of water. Not enough to drown him, just enough to make him good and uncomfortable.

To this, they added the lights. For eight hours, lights flashed in the Ambassador's room. Bright lights to pry under his eyelids; dull, flashing ones to disturb him.

Sound came next—screeches and screams and shrill, grating noises. The sound of a man's fingernails being dragged across slate, amplified a thousand times, and strange, sucking noises, and shouts and whispers.

Then, the smells. Then, everything else they could think of that could drive a man insane.

The Ambassador slept peacefully through it all.

"**N**OW look," Cerey said, the following day, "let's start using our damned heads." His voice was hoarse and rough. Although the psychological torture hadn't bothered the Ambassador, it seemed to have backfired on Cerey and his men.

"Where in hell is Darrig?"

"Still working on that idea of

his," Malley said, rubbing his stubbled chin. "Says he's just about got it."

"We'll work on the assumption that he can't produce," Cerey said. "Start thinking. For example, if the Ambassador can turn into anything, what is there he can't turn into?"

"Good question," Harrison grunted.

"It's the payoff question," Cerey said. "No use throwing a spear at a man who can turn into one."

"How about this?" Malley asked. "Taking it for granted he can turn into anything, how about putting him in a situation where he'll be attacked even *after* he alters?"

"I'm listening," Cerey said.

"Say he's in danger. He turns into the thing threatening him. What if *that thing* were itself being threatened? And, in turn, was in the act of threatening something else? What would he do then?"

"How are you going to put that into action?" Cerey asked.

"Like this." Malley picked up the telephone. "Hello? Give me the Washington Zoo. This is urgent."

The Ambassador turned as the door opened. An unwilling, angry, hungry tiger was propelled in. The door slammed shut.

The tiger looked at the Amba-

sador. The Ambassador looked at the tiger.

"Most ingenious," the Ambassador said.

At the sound of his voice, the tiger came unglued. He sprang like a steel spring uncoiling, landing on the floor where the Ambassador had been.

The door opened again. Another tiger was pushed in. He snarled angrily and leaped at the first. They smashed together in midair.

The Ambassador appeared a few feet off, watching. He moved back when a lion entered the door, head up and alert. The lion sprang at him, almost going over on his head when he struck nothing. Not finding any human, the lion leaped on one of the tigers.

The Ambassador reappeared in his chair, where he sat smoking and watching the beasts kill each other.

In ten minutes the room looked like an abattoir.

But by then the Ambassador had tired of the spectacle, and was reclining on his bed, reading.

"I GIVE up," Malley said. "That was my last bright idea."

Cercy stared at the floor, not answering. Harrison was seated in the corner, getting quietly drunk.

The telephone rang.

"Yeah?" Cercy said.

"I've got it!" Darrig's voice shouted over the line. "I really think this is it. Look, I'm taking a cab right down. Tell Harrison to find some helpers."

"What is it?" Cercy asked.

"The chaos underneath!" Darrig replied, and hung up.

They paced the floor, waiting for him to show up. Half an hour passed, then an hour. Finally, three hours after he had called, Darrig strolled in.

"Hello," he said casually.

"Hello, hell!" Cercy growled. "What kept you?"

"On the way over," Darrig said, "I read the Ambassador's philosophy. It's quite a work."

"Is that what took you so long?"

"Yes. I had the driver take me around the park a few times, while I was reading it."

"Skip it. How about—"

"I can't skip it," Darrig said, in a strange, tight voice. "I'm afraid we were wrong. About the aliens, I mean. It's perfectly right and proper that they should rule us. As a matter of fact, I wish they'd hurry up and get here."

But Darrig didn't look certain. His voice shook and perspiration poured from his face. He twisted his hands together, as though in agony.

"It's hard to explain," he said. "Everything became clear as soon as I started reading it. I saw how

stupid we were, trying to be independent in this interdependent Universe. I saw—oh, look, Cercy. Let's stop all this foolishness and accept the Ambassador as our friend."

"Calm down!" Cercy shouted at the perfectly calm physicist. "You don't know what you're saying."

"It's strange," Darrig said. "I know how I felt—I just don't feel that way any more. I think. Anyhow, I know your trouble. You haven't read the philosophy. You'll see what I mean, once you've read it." He handed Cercy the pile of papers. Cercy promptly ignited them with his cigarette lighter.

"It doesn't matter," Darrig said. "I've got it memorized. Just listen. Axiom one. All peoples—"

Cercy hit him, a short, clean blow, and Darrig slumped to the floor.

"Those words must be semantically keyed," Malley said. "They're designed to set off certain reactions in us, I suppose. All the Ambassador does is alter the philosophy to suit the people he's dealing with."

"Look, Malley," Cercy said. "This is your job now. Darrig knows, or thought he knew, the answer. You have to get that out of him."

"That won't be easy," Malley said. "He'd feel that he was be-

traying everything he believes in, if he were to tell us."

"I don't care how you get it," Cercy said. "Just get it."

"Even if it kills him?" Malley asked.

"Even if it kills you."

"Help me get him to my lab," Malley said.

THAT night Cercy and Harrison kept watch on the Ambassador from the control room. Cercy found his thoughts were racing in circles.

What had killed Alferi in space? Could it be duplicated on Earth? What was the regularizing principle? What was the chaos underneath?

What in hell am I doing here? he asked himself. But he couldn't start that sort of thing.

"What do you figure the Ambassador is?" he asked Harrison. "Is he a man?"

"Looks like one," Harrison said drowsily.

"But he doesn't act like one. I wonder if this is his true shape?"

Harrison shook his head, and lighted his pipe.

"What is there of him?" Cercy asked. "He looks like a man, but he can change into anything else. You can't attack him; he adapts. He's like water, taking the shape of any vessel he's poured into."

"You can boil water," Harrison yawned.

"Sure. Water hasn't any shape, has it? Or has it? What's basic?"

With an effort, Harrison tried to focus on Cercy's words. "Molecular pattern? The matrix?"

"Matrix," Cercy repeated, yawning himself. "Pattern. Must be something like that. A pattern is abstract, isn't it?"

"Sure. A pattern can be impressed on anything. What did I say?"

"Let's see," Cercy said. "Pattern. Matrix. Everything about the Ambassador is capable of change. There must be some unifying force that retains his personality. Something that *doesn't* change, no matter what contortions he goes through."

"Like a piece of string," Harrison murmured with his eyes closed.

"Sure. Tie it in knots, weave a rope out of it, wind it around your finger; it's still string."

"Yeah."

"But how do you attack a pattern?" Cercy asked. And why couldn't he get some sleep? To hell with the Ambassador and his hordes of colonists, he was going to close his eyes for a moment . . .

WAKE up, Colonel!"

Cercy pried his eyes open and looked up at Malley. Besides him, Harrison was snoring deeply. "Did you get anything?"

"Not a thing," Malley confessed. "The philosophy must've had quite an effect on him. But it didn't work all the way. Darrig knew that he *had* wanted to kill the Ambassador, and for good and sufficient reasons. Although he felt differently now, he still had the feeling that he was betraying us. On the one hand, he couldn't hurt the Ambassador; on the other, he wouldn't hurt us."

"Won't he tell anything?"

"I'm afraid it's not that simple," Malley said. "You know, if you have an insurmountable obstacle that *must* be surmounted . . . and also, I think the philosophy had an injurious effect on his mind."

"What are you trying to say?" Cercy got to his feet.

"I'm sorry," Malley apologized, "there wasn't a damned thing I could do. Darrig fought the whole thing out in his mind, and when he couldn't fight any longer, he—retreated. I'm afraid he's hopelessly insane."

"Let's see him."

They walked down the corridor to Malley's laboratory. Darrig was relaxed on a couch, his eyes glazed and staring.

"Is there any way of curing him?" Cercy asked.

"Shock therapy, maybe." Malley was dubious. "It'll take a long time. And he'll probably block out everything that had to do

with producing this."

Cercy turned away, feeling sick. Even if Darrig could be cured, it would be too late. The aliens must have picked up the Ambassador's message by now and were undoubtedly heading for Earth.

"What's this?" Cercy asked, picking up a piece of paper that lay by Darrig's hand.

"Oh, he was doodling," Malley said. "Is there anything written on it?"

Cercy read aloud: "'Upon further consideration I can see that Chaos and the Gorgon Medusa are closely related.'"

"What does that mean?" Malley asked.

"I don't know," Cercy puzzled. "He was always interested in folklore."

"Sounds schizophrenic," the psychiatrist said.

Cercy read it again. "Upon further consideration, I can see that Chaos and the Gorgon Medusa are closely related." He stared at it. "Isn't it possible," he asked Malley, "that he was trying to give us a clue? Trying to trick himself into giving and not giving at the same time?"

"It's possible," Malley agreed. "An unsuccessful compromise — But what could it mean?"

"Chaos," Cercy remembered Darrig's mentioning that word in his telephone call. "That was the

original state of the Universe in Greek myth, wasn't it? The formlessness out of which everything came?"

"Something like that," Malley said. "And Medusa was one of those three sisters with the horrible faces."

Cercy stood for a moment, staring at the paper. Chaos . . . Medusa. . . and the organizing principle! Of course!

"I think—" He turned and ran from the room. Malley looked at him; then loaded a hypodermic and followed.

IN the control room, Cercy shouted Harrison into consciousness.

"Listen," he said, "I want you to build something, quick. Do you hear me?"

"Sure." Harrison blinked and sat up. "What's the rush?"

"I know what Darrig wanted to tell us," Cercy said. "Come on, I'll tell you what I want. And Malley, put down that hypodermic. I haven't cracked. I want you to get me a book on Greek mythology. And hurry it up."

Finding a Greek mythology isn't an easy task at two o'clock in the morning. With the aid of FBI men, Malley routed a book dealer out of bed. He got his book and hurried back.

Cercy was red-eyed and excited, and Harrison and his helpers

were working away at three crazy looking rigs. Cercy snatched the book from Malley, looked up one item, and put it down.

"Great work," he said. "We're all set now. Finished, Harrison?"

"Just about." Harrison and ten helpers were screwing in the last parts. "Will you tell me what this is?"

"Me too," Malley put in.

"I don't mean to be secretive," Cercy said. "I'm just in a hurry. I'll explain as we go along." He stood up. "Okay, let's wake up the Ambassador."

THEY watched the screen as a bolt of electricity leaped from the ceiling to the Ambassador's bed. Immediately, the Ambassador vanished.

"Now he's a part of that stream of electrons, right?" Cercy asked.

"That's what he told us," Malley said.

"But still keeping his pattern, within the stream," Cercy continued. "He has to, in order to get back into his own shape. Now we start the first disrupter."

Harrison hooked the machine into circuit, and sent his helpers away.

"Here's a running graph of the electron stream," Cercy said. "See the difference?" On the graph there was an irregular series of peaks and valleys, constantly shifting and leveling. "Do you

remember when you hypnotized the Ambassador? He talked about his friend who'd been killed in space."

"That's right," Malley nodded. "His friend had been killed by something that had just popped up."

"He said something else," Cercy went on. "He told us that the basic organizing force of the Universe usually stopped things like that. What does that mean to you?"

"The organizing force," Malley repeated slowly. "Didn't Darrig say that that was a new natural law?"

"He did. But think of the implications, as Darrig did. If an organizing principle is engaged in some work, there must be something that opposes it. That which opposes organization is—"

"Chaos!"

"That's what Darrig thought, and what we should have seen. The chaos is underlying, and out of it there arose an organizing principle. This principle, if I've got it right, sought to suppress the fundamental chaos, to make all things regular.

"But the chaos still boils out in spots, as Alfarn found out. Perhaps the organizational pattern is weaker in space. Anyhow, those spots are dangerous, until the organizing principle gets to work on them."





HE turned to the panel. "Okay, Harrison. Throw in the second disrupter." The peaks and valleys altered on the graph. They started to mount in crazy, meaningless configurations.

"Take Darrig's message in the light of that. Chaos, we know, is underlying. Everything was formed out of it. The Gorgon Medusa was something that *couldn't be looked upon*. She turned men into stone, you recall, destroyed them. So, Darrig found a relationship between chaos and that which can't be looked upon. All with regard to the Ambassador, of course."

"The Ambassador can't look upon chaos!" Malley cried.

"That's it. The Ambassador is capable of an infinite number of alterations and permutations. But *something* — the matrix — can't change, because then there would be nothing left. To destroy something as abstract as a pattern, we need a state in which no pattern is possible. A state of chaos."

The third disrupter was thrown into circuit. The graph looked as if a drunken caterpillar had been sketching on it.

"Those disrupters are Harrison's idea," Cercy said. "I told him I wanted an electrical current with absolutely no coherent pattern. The disrupters are an extension of radio jamming. The first alters the electrical pattern.

That's its purpose: to produce a state of patternlessness. The second tries to destroy the pattern left by the first; the third tries to destroy the pattern made by the first two. They're fed back then, and any remaining pattern is systematically destroyed in circuit . . . I hope."

"This is supposed to produce a state of chaos?" Malley asked, looking into the screen.

For a while there was only the whining of the machines and the crazy doodling of the graph. Then, in the middle of the Ambassador's room, a spot appeared. It wavered, shrunk, expanded —

What happened was indescribable. All they knew was that everything within the spot had disappeared.

"Switch it off" Cercy shouted. Harrison cut the switch.

The spot continued to grow.

"How is it we're able to look at it?" Malley asked, staring at the screen.

"The shield of Perseus, remember?" Cercy said. "Using it as a mirror, he could look at Medusa."

"It's still growing!" Malley shouted.

"There was a calculated risk in all this," Cercy said. "There's always the possibility that the chaos may go on, unchecked. If that happens, it won't matter much what—"

The spot stopped growing. Its

edges wavered and rippled, and then it started to shrink.

"The organizing principle," Cercy said, and collapsed into a chair.

"Any sign of the Ambassador?" he asked, in a few minutes.

The spot was still wavering. Then it was gone. Instantly there was an explosion. The steel walls buckled inward, but held. The screen went dead.

"The spot removed all the air from the room," Cercy explained, "as well as the furniture and the Ambassador."

"He couldn't take it," Malley said. "No pattern can cohere, in a state of patternlessness. He's gone to join Alfara."

Malley started to giggle. Cercy felt like joining him, but pulled himself together.

"Take it easy," he said. "We're not through yet."

"Sure we are! The Ambassador—"

"Is out of the way. But there's still an alien fleet homing in on this region of space. A fleet so strong we couldn't scratch it with an H-bomb. They'll be looking for us."

He stood up.

"Go home and get some sleep. Something tells me that tomorrow we're going to have to start figuring out some way of camouflaging a planet."

—ROBERT SHECKLEY

the TRAP

By BETSY CURTIS

*She had her mind made up—the
one way they'd make her young
again was over her dead body!*

OLD Miss Barbara Noble twitched aside the edge of the white scrim curtain to get a better look at the young man coming down the street. He might be the one.

The young man bent a little under the weight of the battered black suitcase as he crossed Maple and started up Prospect on Miss Noble's side. She could see him set the case down on the

wide porch of the Raney house and wipe his forehead with a handkerchief. Then she lost sight of him as he advanced to the door. He could be a visitor to the Raney's, but they were out of town on vacation. He could be a salesman.

Miss Barbara shifted her rocker to the other side of the window where she could watch without having to disturb the curtain.

Illustrated by EMM

This second-floor sitting room made an excellent lookout. She quickly scanned the street in the other direction, but there was no sign of movement in the hot sunlight. She settled down to watch the black suitcase sitting uncommunicatively at the edge of the porch.

It must have been all of two minutes before the young man appeared from under the overhanging roof and picked up the case. A persistent fellow. He went down to the sidewalk and approached her own house, came up on her own front doorstep, tried to set the case down on the narrow stoop, couldn't, straightened up and rang the bell. A raucous buzz filled the sitting room.

BARBARA Noble leaned toward the window, pulled back the curtain a scant inch, and studied his back as he looked at the windows on the other side of the front door. Limp yellow hair and a big perspiration stain in the middle of a dark sport shirt were her chief impressions. He could be a bona fide salesman working hard at it. She wouldn't let him in, of course; but she felt a little sorry for him-lugging that big case around in this weather. Then he turned and looked straight at the window behind which she was hiding, and she

let the curtain go suddenly. Had he seen it move? The buzzer sounded again, imperiously.

Miss Barbara got up stiffly, moved to the big vizer screen in the nearest corner, and switched it on. The man might have something interesting and she couldn't get out to shop the way she used to. She smoothed her lilac house-dress and left the room to descend the stairs to the front door.

In the tiny front hall she hesitated, then opened the door inward about eight inches. Deftly the man stuck the broad brown toe of his shoe into the opening and looked down at her. She grinned as she saw his expression of shock.

She was old, really old. Her sparse white hair was pulled so tightly into a knob on top of her head that the plentiful wrinkles on her forehead and around her eyes seemed to run vertically, giving her an oriental look. The hand she rested on the door jamb was a waxy-white claw, a blue vein standing up prominently under the skin tight-drawn over gnarly finger joints. He had probably never seen a woman much past middle age.

"Well?" Her croak was high and rough.

THE young man recovered himself and began his spiel. "Madame, I represent one of the

best-known and most reputable firms in the country. Our products have received three international medals for purity and effective performance. They . . ."

"What are you selling, young man?"

"I have the privilege of being a field representative for Taffeta Beauty Aids. Please accept this generous ten-ounce bottle of our Diamond Dew Refreshment Lotion . . ." He reached into his side pocket and brought it out, offered it with the most appreciative smile, his 'you hardly need this' smile.

Her hand did not reach out. "I don't want any. Goodbye!" The door tightened against his foot.

"But madame," his foot did not budge and his smile became both engaging and pleading. "all I ask is a chance to show you our line. Our products sell themselves. Besides, I'm paid on a demonstration basis—so much for every potential customer who receives our free sample and so much for every home demonstration. You wouldn't want me to lose two-fifty when it would take only six and a third minutes of your time exactly to look over one of the most amazing displays ever . . ."

"Well, I don't know . . ."

"I know you'll enjoy watching our Tissue Cleanser in action and seeing the new simplicity of our

Home Re- . . ." (oops, he'd almost said it) ". . . Hair Relustrification Kit. I promise you that your few minutes won't be wasted."

"Yours would be, young man. I don't buy that stuff."

"You may be one of the lucky few women who don't need our products, but I don't think you can say that before you've seen them."

"I never did see such persistence, honest to goodness!" Her face assumed a crabbed smile. "Come along then."

SHE moved back from the door into the darkness of the house; and the salesman shifted his case back to his left hand, pushed the front door wide and took a quick long step inside. He was just in time to hear the slight click of the closing of a second door in front of him. He reached for the knob, turned it; but the door was locked. The outside door still stood open, caught by the end of the sample case.

The July daylight from outside showed him that he was in a tiny entrance hall not more than forty inches each way. He pulled the case in and by squeezing against the inner door allowed the front door to close. Anyhow, he was inside the house. He rapped sharply on the inner door.

The latch on the front door

snapped to and instantly the hall was flooded with light from a tremendous bulb in the ceiling, which, surprisingly, was twenty feet above him.

A harsh voice, tinny with tremendous amplification but unmistakably that of the old woman, filled the hall. "ALL RIGHT, YOUNG MAN. I HAVE THE VIZER TURNED ON YOU. LET'S SEE THE DEMONSTRATION. I BELIEVE YOU SAID SIX MINUTES. GET ON WITH IT."

Screening his eyes with his fingers, the salesman scanned the walls and ceiling for the vizer lens, found it beside the five-hundred watt bulb pouring blindingly down on him, on the other side of a speaker grille.

"C-certainly, madame." What a layout. As he automatically laid his case on the floor and opened back the top against the front door, his eyes searched the walls for indications of openings which might mean unexpected defenses such as anesthetic tanks. The only breaks in the two smooth white plaster surfaces which he could see as he squatted before the case were a horizontal row of glass bosses on each side at about the height of his knees.

"Now, since my face," he closed his eyes and flashed a toothy smile, like a video actor, up at the vizer lens, "is subjected to the daily care of Taffeta Products," he turned his face down

to the case and gritted his teeth, "I must smear facial muscle softener into the left half to show the action and appearance of muscles which have lost their toaus." He whipped the cover off a small ivorine jar and rubbed his cheek vigorously with a brownish salve. "You will note that this softener also contains a percentage of grime which lodges in the pores."

He heard a gasp from the speaker grille when he displayed a face whose left cheek and brow were sagged, wrinkled and hideously brown speckled. From somewhere behind the gasp, he heard a continuous tinkle of tiny bells.

His hands moved among the bottles and jars, raised a round silver box which he held up. "The delicately perfumed applicator pads for all applications of Taffeta Preparations are pre-saturated with Firmol Tone Charger. I dip the pad into this solution of Enhancing Hyssop," he did so, "and work it gently into the pores. The results are instantaneous!" He turned up his original video star appearance.

WHILE bending his body forward to reach the articles strapped to the top of the case, he noticed that the tone of the distant bells was raised. Screwing a circular hairbrush to the thread



of a collapsible tube, he sank back on his haunches. The bell tones were lower. He placed a hand on one of the glass bosses nearest the inner door, apparently to steady himself. An even lower tone was added to the bell notes. Obviously electric eyes with a set of bell signals in the old woman's present location. He smiled down at the floor—to himself.

"Now I want you to notice closely this object which I will show you." He held up the brush with the tube screwed on its back and turned it about. "Do you know what this is?"

There was no answer from the speaker but its own hum and the tinkle of the bells. "What does it look like?" He spoke rapidly, pleasantly. There was still no answer.

He rose quickly and tried the knob of the inner door again. He could hear the bell notes lower in pitch as he pressed against the door.

"LET ME SEE THE THING AGAIN, YOUNG MAN. HONEST TO GOODNESS, WHAT DIFFERENCE DOES IT MAKE WHETHER OR NOT I KNOW WHAT IT IS? IT LOOKS LIKE A HAIRBRUSH WITH SOME DO-JIGGER ON THE TOP."

He jumped back to the center of the hall. "This brush is the essential feature of our sensational Hair Relustrifier Kit. The tube screwed to the top feeds the

specially developed Brillianceette directly through each hollow bristle to reach every part of the hair." He ran or rather scrubbed the brush through the right side of his long fair pompadour with small rotary motions. When he removed the brush, that side of his head was covered with crisp yellow ringlets which shone under the light like sculptured gold.

"THAT'S SOME SORT OF A TRICK! DO IT ON THE OTHER . . ." Her voice was interrupted by a synchopated clicking. A telephone signal. "JUST A MOMENT, YOUNG MAN." The hum of the speaker cut off and the sudden silence seemed full of the echoes of the bells.

INSTANTLY the man dropped the gadget into the case and grabbed a handful of cleansing tissues from a box in it. He snapped down the top of the case and whipped the straps through the buckles. Then he shoved the case against one of the side walls and sat on it to flip off his shoes and socks. Shoving his back tightly against the wall, he bent his knees up and pushed his bare feet flat against the other. After placing the wad of tissues in his lap, he put his hands against the wall below his buttocks and, like an experienced mountain climber, inched his way rapidly up the 'chimney' of

the hall. When his head touched the ceiling, he braced himself firmly with his left hand and reached with his right for the tissues in his lap. Protecting his hand with several of the white papers, he felt above him for the base of the light bulb, unscrewed it, and dropped it gently onto the rest of the tissues still in his lap. The sudden blackness was smothering.

Heat seeped through the tissues more rapidly than he had expected; and the effort to keep his knees from contracting and spilling him in the utter darkness to the floor fifteen feet below was agony.

When he finally reached the floor, he placed the bulb on it beside the sample case. Then he opened the front door and closed it again, leaving the door caught open a fraction of an inch by the latch against the frame. Taking an anesthetic cartridge out of his pants pocket, he broke the seal, taking care not to trigger it, and returned to his crevice-climbing posture. He lifted himself again above the row of electric eyes and waited, cartridge in hand, leg muscles cramping painfully.

AFTER Miss Noble had turned off the speakphone, she pulled herself away from the fascinating view of golden curls

and scuttled over to a stiff ladder-back chair beside the telephone stand. She lifted the antique cradle phone (none of these modern invasions of privacy like the vizerphone) and spoke warily into the mouthpiece.

"Who is it? What do you want?"

"Barbara?" A man's voice was urgent.

"This is Miss Noble speaking," she replied haughtily.

The voice was savage. "Well, this is Doctor Harris, then. Have you looked at the mail today? I got my directors' meeting notice this morning."

"Yes, I got one. The fifth of August," she said impatiently.

"And this seems to be our year. There's been a girl here already this morning with some story about my having advertised for a housekeeper. She told it to the doorphone and wouldn't leave when I said I didn't want anybody—but it only took one drop of skunk oil in the hallway to send her packing." The horrid chuckle that came from the receiver was so raucous that Miss Noble held it away from her ear.

"Blonde or brunette?" she asked noncommittally.

"Blonde — and really young, not a damn rejuvenee!"

"Rod Harris! You actually went and pecked at her, you old goat!"

"Only through the one-way."

"Well, since the company knows that a pretty girl is still good bait for an old ninny, you're as good as a goner. They'll have you rejuvenated before long."

"They won't get a chance to! And I'm going to get old enough so I can't even lift a hand to thumb my nose at the company. Then I'm going to go and die and the Juvine Perpetual Youth Corporation will scream in agony as it disbands and makes public property of its hallowed formulas as per the original articles of incorporation . . . and you will probably get a new set of false teeth and take the treatment again since you could get it real cheap when the monopoly's finished and not have to disturb your millions salted away in the sugar bowl."

This mixture of facetiousness and downright sarcasm was only surpassed by Miss Noble, who snapped back, "Don't you sneer at me, Doctor Roland Harris, when you know perfectly well that the only reason I have to go on living this long is to make sure that you are really dead first. You didn't invent rejuvenation all by yourself without the aid of Barbara Noble, Ph.D., and the company has the sole right to the process until we're both dead. And, if you start pecking at plump blonde wenches at this

point, I suppose I'll have to live till Los Alamos freezes over!"

"All right, all right. But she wasn't plump. She wasn't any bigger than you are. Besides, you know I'd rather have dinner with you. My man Marko could give us roast beef with all the fixings and afterward I want you to hear my latest discovery. It's the best damn extempore-singer you've ever heard, Jeery Wade—fellow in his first late fifties, no fluff-brain of a juvenile—a blood and thunder baritone that'll lift that knob of hair clean off your scalp. Let's say you get here about six-thirty and I'll phone him we'll be over at his place for a session of hollering about eight."

MISS Noble's scorn needed no vizer to carry it over the wire in full force. "I'm not going to budge out of this house until after the director's meeting and then only if the shops stop all delivery service. This time I'm not taking any chances. Life is too much of a bore to have to put up with it for another eighty years even for your marvelous singer who would probably go and get rejuvenated just as I got 'to enjoy him. And nothing could induce me to listen to an evening of your stories for the nine hundredth time. If there's one thing I'm thankful for in this scatter-brained age, it's the marriage

dissolution law that's got me free from your anecdotes after three separate terms of fifty years each."

"Now, Barbara, was it that bad?" Roland Harris sounded distressed.

"Do you really think I could be honestly grateful to the Corporation for a hundred and fifty years of listening to that disgraceful old thing about the Martian, the Venusian, and the robot?"

"Well, if you feel that way about it, I'll keep my discoveries to myself. I hope your fancy hallway keeps you safe till you rot."

"It's doing all right," replied the old woman smugly. "I have a young pup down there right now cooling his number thirteens and waiting to pretend to interest me in some new face paint and hair gik. My electric eye set and vizer are less repulsive than your skunk oil and twice as effective."

"They're not going to stop me from having a good time while I last, anyhow. I think they're through with me for today; and I'm going to hear Jeery Wade, anyhow. He'll make up a hooting good song about all this when I tell him."

"Take care of yourself, Rod . . . goodbye," said Miss Noble, almost concernedly.

She dropped the phone into its

cradle, rose, and went back to the vizer screen, switching on the speaker as she sat down. Only then did she notice that the screen was entirely dark except for a vague sliver of gray.

"Are you still there, young man?" she asked the microphone.

There was silence from the speaker. The hammer on each bar of the long metal xylophone of the electric eye signal hung motionless.

"He's gone . . . and left the front door unlatched too. And I thought he was persistent." She was disappointed. "He owes me four more minutes of fun."

She got up slowly and started for the door. "That curly hair stuff is new since my last sixties, too. I wonder if it would work on white hair . . . I'd better go down and close the door. Can't have just anybody coming into one's house."

SHE descended the stairs, opened the door from the front room, then took one step forward into the hall. Before she could interpret the soft bump of the salesman's bare feet as they struck the floor, she was encircled by his strong arm; and the hiss of the anesthetic gun was loud in the small area of the hall. Limply she sagged against his arm.

The hissing of the gun stopped. The young man slipped it into

his pocket and, turning, thrust the inner door wide open with his now free hand. Entering the tidy front room, he kicked the door shut behind him and gulped in the good air before he headed for the back of the house, cradling the small body easily in his arms. Failing to find there what he was looking for, he went up the narrow white-railed stairway to the second floor. Across the landing, the gleam of porcelain showed through a half-open door.

He laid his burden carefully on the vari-colored braided rug by the tub and began to draw a warm bath, testing the temperature frequently with his hand. When water reached the overflow outlet, he turned off the tap and sprinted downstairs for his sample case. The hall was still chokingly full of gas; and after grabbing out the case, he slammed the door again. He brought the case up to the bathroom, where he opened it on the floor beside the form of the old woman. He lifted out the tray, revealing masses of silvery tubing and a number of flasks of iridescent solutions nestling among loops of rubber insulated wiring. One flask he emptied into the bath, making the water seethe and turn a cloudy green.

Then, dashing down the stairs again, he began looking for the

telephone. His search became more and more hurried, as he opened cupboards and drawers in front room and kitchen with no success. Returning upstairs, he almost missed the instrument in the sitting-room because he was expecting the familiar sight of a round vizer screen. He stood over the phone and dialed.

"Hey, Alice!"

"What luck, Riggy?"

"I'm in. The old lady's out cold on the bathroom floor. Primer solution's in the bath at five above tepid. I'm shoving her in now—with all her clothes on, of course—and I've wasted a lot of time already looking for this hypoblastic phone, so beat it on over here with Margy and get to work."

"Are you ordering me around, Rigel O'Maffey?"

"You know I never did this job on a woman. And don't forget, honey, we'll get enough out of this to get a new copter together. C'mon now." He put the phone back in the cradle before she could answer.

BACK in the bathroom, he drew a long thermometer from the case, took a careful reading on the water, ran in a little more hot from the faucet and left it running the slightest dribble.

Carefully lifting the small body of Barbara Noble, Ph.D.,

he slid it gently into the water feet first over the end, smoothing down with one hand the percale housedress which ballooned as she went into the water. Finally he knelt beside the tub, holding her head out of the water in the crook of his elbow.

A banging on the inner door downstairs some fifteen minutes later reminded him of the force with which he had slammed it in his hurry to reach the uncontaminated air of the front room. He looked longingly across the bathroom at the racks of towels on the other side, but finally, as the banging stopped and a feminine voice began yelling, "Hey, Riggy! Let us in!" he grabbed up the bright rug and wadded it under the scrawny neck.

The girls scolded him all the way up the stairs for not leaving the door unlocked, while he tried to explain, at the same time, that he had to hold up the woman's head.

"Screepers, Riggy, what do you think the perfectly good pair of water-wings in your case is for?"

Humbled, he departed as the girls took over the beginning of the complicated, fortnight-long process of the rejuvenation of Barbara Noble.

THE receptionist behind the ebony desk, whose gold plate proclaimed it as the headquarters

of the Juvenile Perpetual Youth Corporation, crammed shut the drawer before her. A metallic clink from within was the fall of a mirror with which she had been assisting the application of scarlet which now fluoresced gently on her full lips.

Tossing her head (which showed the crop of glistening black curls to the fullest advantage) in a preoccupied manner, she addressed the man who stood before her desk. "How can the Juvenile Perpetual Youth Corporation serve you?" Her hastily assumed look of efficient importance was replaced by melting eagerness as she took in the chiselled perfection of features and the broad shoulders of the young man in knife-creased bronze spunlon.

"I'm Harris. For the directors' meeting." His voice was curt.

"You're Doctor Harris? The Director? Oh, do come in." She rose from the desk and went around the end of it to open the high wrought-gold gate and hold it wide for him. "You're a little early. I'll take you down to the Board Room." Eager willingness to help was apparent in her every gesture.

"Thanks, I know the way," he informed her, brushing past.

She followed him, however, across the patio-like reception room, with its exotically garden-

borders and splashing fountain, down the long corridor past glowing murals of men and women swimming, dancing and playing tennis, past tapestry shielded doorways to the great bright arch at the end. Before he went through, she caught his sleeve.

"I should be pleased to steno for you today, if you need me."

He turned and looked at her as if he had not known she was behind him. "Thanks, but I shasn't need one. It'll be a short meeting." He smiled down and patted her cheek. "But if I'm not entirely satisfied with the proceedings, maybe I can dictate a little afterward."

She laughed as if that were a special joke between them and retreated rapidly down the corridor before he had time to turn and miss the splendor of her graceful carriage.

His eyebrows were still raised and the corners of his mouth curved in appreciation when he passed through the arch and into the vast room under the clear bubble of a tremendous skydome.

A GIRL was sitting there, her back to him, looking out over the simmering city streets to the cool rise of mountains beyond. He recognized at once the slight figure, the sheen of the long curling auburn bob, the poise of her head and slim hand

resting on the arm of the chair.

"Babs!"

She turned half around. "Hello, Rod."

He grinned and sank down in the next chair. "Here we are again."

"Knocked out by your own skunk oil?" she asked pointedly.

"No. Company copter man got me leaving Jeery Wade's. What happened to you? I thought you were walled up neatly for the declining years."

"The cosmetic man ambushed me in the hall. But I've got another fifty years to figure out something better . . . if I still need it."

"What do you mean if you still need it? Are you changing your mind about rejuvenation?"

She smiled. "Well, you know it's always fun at first. But I'm having my lawyer come to this meeting. I've got an idea we can change the articles of agreement so that the process can finally become public property at the end of another fifty years instead of only after our deaths. Then if we want to go on and die, nobody" (she waved her hand around the great room at the little group of athletic men and glamorous, expensively gowned women moving in through the arch) "nobody will have any financial interest in rejuvenating us. Then, too, our own fat in-

comes will lapse; and since that's the reason we set up the articles the way they are—so we'd never be in danger of starving, that is—we'd have the more interesting choice of whether to die off or get young again and go back to work. Would you sign a fifty-year termination, Rod?"

"Would you marry me for the fifty years, Babs?" His voice was gentle, pleading.

"Honest to goodness, now, aren't you really pretty tired of me?" she asked earnestly, turning to face him.

"No, I can't say I am. You're pretty special, doctor, and you're special pretty." It was a ritual.

"You know you're the only man. I'll marry you. Will you sign?"

"Of course I'll sign. I would have anyhow when I knew you wanted me to. And Babs—maybe we could get some sort of jobs now—sort of to get in practice. I'll bet we could rent a lab somewhere and do commercial analyses for a while until we got hit by another idea for research."

"Rod, that's the best idea you've had in the last hundred and fifty years. But we could have a honeymoon first, couldn't we?"

"That's your best suggestion in the last seventy years. And maybe we could get Jeery Wade and his wife to rejuvenate and go

with us. After the first couple of weeks, that is."

THEY left the meeting arm in arm, somewhat ahead of the rather disgruntled group of directors, who stayed behind to lament the end of a good thing. In the garden room, Barbara stopped to choose an orchid.

Rod Harris wandered on to the receptionist's desk, where the girl of the black curls waited, smiling.

He looked back at Barbara, then smiled down at the girl. "Just like I said . . . a short meeting. No need for any dictating. Lucky you."

"Oh, I don't know," she countered coyly.

"Say, I heard a story the other day you might like. Do you like stories?"

"What kind of story?"

"You'd have to be the judge of that."

Suddenly Barbara was with them, pinning on a bronze and green blossom. "C'mon along, dear. We've got a good many things to do before we leave."

He opened the golden wicket for her and followed her out. Turning back toward the desk, he called to the girl. "I may be back in a few weeks to see about a job. Remind me then to tell you the one about the Martian, the Venusian and the robot."

—BETSY CURTIS



GALAXY'S 5 Star Shelf

THE SPACE MERCHANTS by Frederik Pohl and C. M. Kornbluth. Ballantine Books, Inc., New York, 1953. Cloth \$1.50; paper, 35¢

I HAVE waited over a year for a chance to say in print that *Gravy Planet* (now ineptly retitled as above), which was a 1952 serial in *GALAXY*, is perhaps the best science fiction satire since *Brave New World*, better even than *Player Piano* and for my money vastly superior to the dull and overrated *1984*.

And now I have an opportunity to point out in addition that the

flaws some people found in the magazine version, such as the ending on Venus, have been polished out, so that what we now have is a well-nigh perfect attack on the stupid, the cynical, the mercenary, the power-crazy tendencies of the Salesmen's Civilization.

The story? Fowler Schocken Associates, advertising agency supreme, steals the project for exploiting the planet Venus from a competitor, and places Mitch Courtenay, star class copysmith who tells the story himself, in charge.

Courtenay is kidnaped by the

competitor and nearly bumped off. He then finds out some home truths about the Consies, the subversives of the future, who are Conservationists. They want to save Venus for a naturally balanced economy rather than for the destructive looting of a sales-insane monopoly. Courtenay becomes a secret Consie and turns Venus over to these inheritors of the future.

The plot is only a small part of the book's merits, though. Look what it has—

Wood is so rare that "a real oak ring" is more valuable than a diamond solitaire. Space in Earth's cities is so hard to find that the fire-stairs in skyscrapers are rented out (one step per couple) to the lower classes for sleeping quarters. Captive audiences are so captive that it is legal to drug coffee (the Fowler Schocken crowd have it trademarked "Coffiest") with a habit-forming alkaloid which costs \$5,000 to be cured of. Government has fallen so completely into the hands of the corporations that there are Senators from DuPont, Nash-Kelvinator, Yummy-Cola, and so on, and the Presidency of the United States has become a hereditary and solely honorary office—a minor detail that one doesn't discover till the third page from the end of the book!

This is a permanent addition to the good books of our era. It is not "just another science fiction book," though I am sure you will find some smug snobs referring to it as such.

Buy it—read it—give it away. You can afford to, at 35¢ a copy.

FLATLAND by A. Square (Edwin A. Abbott). Dover Publications, Inc., New York, 1953. 103 pages, \$2.25 cloth, \$1.00 paper

THIS classic fantasy, first published in Boston in 1885, was written by a schoolmaster who specialized in literature and theology. How he ever came to write this charming bit of mathematical whimsy, with its curious yet sharply real picture of two-dimensional life, has never been determined.

Banesh Hoffman, who wrote an introduction for this new edition, states that "Its aim is to instruct," but to instruct whom about what, we are not informed.

Certainly not mathematics; there isn't an equation in the whole book, though there are some amateur geometrical drawings by Abbott himself. Perhaps morals, though the moral of this book is more radical than one would imagine such an author would want to teach openly. Regularity and conservatism are the death of progress: this is really

the lesson it teaches.

Beyond that, it is simply and solely a delightful, stately bit of fancy, which should be read for pleasure, not for profit.

THE GOLDEN APPLES OF THE SUN by Ray Bradbury. Doubleday & Co., Inc., New York, 1953. 250 pages, \$3.00

WITH this book of 22 short stories, Ray Bradbury steps out of the class (if he ever was in it, which some fanatics still deny) of science fiction writer. Not more than seven of the stories can be labeled science fiction; I believe only two appeared in science fiction magazines.

Bradbury is now clearly in a class with the great writers of imagination of modern times—not just a “special” writer for a “special” audience. He writes in every form and mood except the pedestrian, the formula or the cheap. Sometimes he may over-write a little, but he never writes badly.

In the new book there are, I believe, some of the best imaginative stories he or anyone else has ever written. One cannot even begin to describe their delights; but one can at least mention a few of the ideas which Bradbury develops.

There is the murderer who goes mad trying to polish his fin-

gerprints off everything he may have touched—a horror story that is already a classic.

There is the Chinese Emperor of the year 400 who beheaded one of his subjects who invented a man-carrying kite because it made the Chinese Wall worthless—soldiers could glide over it!

A biting sketch describes race prejudices in an amateur baseball game. Another tells of the Mexican who did not like a fashion photographer using the front of his adobe shack as a background for photos of young ladies modeling clothes, and made an issue of it in a magnificently unanswerable way. Then there is the lovely one about seventeen-year-old Marianne, who had just Discovered Boys.

Quote: “She’ll be all right,” Mother said to Father. “Girls only seem stupid because when they’re in love they can’t hear.”

“It affects the semicircular canals,” said Father. “Making many girls fall right into a fellow’s arms. I know. I was almost crushed to death once by a falling woman, and let me tell you—”

And then there’s the oddly tragic story about the boy named Willie, who never grew up, and who always had to move from adopted family to adopted family whenever his persistent youth began to show.

This book presents a writer of genius approaching the height of his powers. It should not be missed.

A ROCKET DRIVE FOR LONG RANGE BOMBERS by E. Sanger and I. Bredt. Robert Cornog, 990 Cheltenham Rd., Santa Barbara, Calif. 175 pages, \$3.95

WILLY LEY has called my attention to this important but highly technical document with the remark that it is one of the basic works on the theory and practice of rocket-powered airplanes. It was translated from the German by M. Hamermesh of the U.S. Navy's Radio Research Laboratory, and has been previously available only in photostats at around \$18.00.

The report, which Mr. Ley discussed at length in Appendix 1 of his *Rockets, Missiles and Space Travel*, 1951 edition, explores the unique theory that a winged rocket, climbing at very high speeds and steep angle, would ricochet repeatedly from denser to thinner atmosphere levels, like a flat stone spinning over water, thus enormously increasing its flying range.

Dr. Eugen Sanger is an Austrian engineer who once worked for the Herman Goering Institute of the Luftwaffe. Dr. Irene Bredt

is a mathematician who helped Dr. Sanger in the immensely complex theoretical calculations described in the report. Today they are married and are living in Paris, working for the French Government's Arsenal de l'Aeronautique. Dr. Sanger is also president of the International Astronautical Federation.

THIS ISLAND EARTH by Raymond F. Jones. Shasta Publishers, Chicago, 1953. 220 pages, \$3.00

RAYMOND Jones has always had three major interests in science fiction: alien invasions, infiltrations or inspections of Earth; advanced computer-cybernetic concepts; and the horrors of war, particularly atomic. In this swift-moving adventure, Jones combined all three interests—with, unfortunately, a somewhat less mature point of view than usual in his work.

Evidences of an unbelievably advanced science come to the attention of electronics engineer Cal Meacham. He follows down the clues; makes an "interociter," a weird communications device, by pursuing the mysterious leads; and then is transported to a strange new paradise for scientists in the deserts near Phoenix, Arizona. From then on, he is inextricably involved in the strug-

gles between two great galactic enemies which are using Earth as a secret armory.

The narrative is sharp, exciting; the science is technical, naturalistic. The plot is one of the oldest in any kind of adventure writing and the characters are cardboard chessmen. The tale as a whole is fast, fascinating and shallow, fine for a relaxation hour, but scarcely as rich and rewarding as some of Jones's more profound tales.

MYSTERY OF THE THIRD MINE by Robert W. Lowndes; **ROCKET TO LUNA** by Richard Marsten; **BATTLE ON MERCURY** by Erik Van Lhin; **VANDALS OF THE VOID** by Jack Vance; **THE MYSTERIOUS PLANET** by Kenneth Wright. John C. Winston Co., Philadelphia, 1953. Various pages, \$2.00 each

THESE five new titles in Winston's series of science fiction juveniles bring the total in print to fifteen and also lower the average quality of the group somewhat.

There is one solid item—Marsten's *Rocket to Luna*; the others are perilously close to comic book melodrama: exciting enough, but not particularly well written and certainly not very inventive or real-seeming. However, they all

make quick, exciting reading.

Vance's *Vandals of the Void* tells of space pirates on the Mars-Earth run, complete with a villain named the Basilisk, and all kinds of Western-story derring-do. Lowndes' *Mystery of the Third Mine* is about miners in the Asteroid Belt, and their struggle against the Vested Interests of the phony Asteroid Miners' Association.

Erik Van Lhin's *Battle on Mercury* tells a bizarre tale about Earthian colonizers on the planet nearest the Sun, and how they win their battle against the solar powers with the aid of some extremely odd forms of life that are electric in nature.

The Mysterious Planet by Kenneth Wright is all about a plot to destroy Earth, and how a human youth, held captive on Planet X where the plot is hatched, is able to foil it.

Even Marsten's book is about space travel, making all five similar in basic theme—simple space opera.

Rocket to Luna, however, is of much higher quality. It is an informative and thrilling tale of the first trip to the Moon, via a space station in an orbit around Earth, excellent for its vivid writing, the accuracy of its scientific data, and the realism of its carefully developed plot.

—GROFF CONKLIN

minimum sentence

By THEODORE R. COGSWELL

*His secret was no secret, the
amiable alien insisted—which
was the cause of the trouble!*

FLIP DANIELSON came striding into his forty-credit-a-day suite at the Hotel Metro, wearing a broad grin and a checked suit.

"I've got him right where we want him," he said. "He's hang-

ing on the ropes."

Stretched out on the bed with a wet towel swathed around his head like a turban, the pudgy figure groaned and turned over, burying his face in the covers.

"Go 'way. I'm a sick man."

Illustrated by EMM

Flip skipped across the room, tossed the covers aside, and bounced up and down on the bed.

"Snap out of it, Potsy. I've got us an out."

The fat man winced at the motion and feebly raised his head.

"I'll never live to use an out. What was I drinking last night—straight fusel-oil?"

"Quang Dal was mixing cock-tails out of creme-de-menthe and anisette, and you were taking two to every one of his just to be sociable."

"That explains it," groaned Potsy. "Hand me that bottle on the bureau, like a good fellow. I've got to do something to get rid of that aftertaste."

Flip went over and got it, stopped to take a short sample himself, and then handed it over. There was a liquid gurgle as the bottle dropped an inch and a half, and then a satisfied sigh.

"Maybe I'll live, after all. Now, who's on the ropes?"

"Quang Dal. No thanks to you, though. You were passed out in the corner, snoring like a pig, when I rolled him."

THE fat man looked up in sudden interest. "How much did you get?"

"Looks like about four thousand. I haven't bothered to count it yet."

"Toss it over. I'll be glad to."

"It'll do for chicken feed."

Potsy clucked like a hen and grabbed the billfold. He pulled out a thick sheaf of currency and ran his fingers over it reverently.

"Think of the time we can have—" He broke off suddenly and tossed the money despondently on the floor. "Could have had, I mean. We won't have any use for money where we're going. Twenty years—minimum!" He grabbed his head between his hands as it started in throbbing again.

"And forty years maximum," said Flip unsympathetically. "Next time you line up an easy mark, make sure she's not the Police Commissioner's mother-in-law."

"Maybe something will happen. We've still got three weeks before we have to report for sentencing."

"So?"

"We've still got the ship. We could make a run for it."

"Where to? If it's any place in the Solar System where people can live, the law's there. And if it's a place where the law isn't, people can't live."

Potsy drank unhappily from his bottle. "What gets me is that the floppers and the crawlers and the wigglers and the rest can hop around the Galaxy in just about nothing flat while we humans can't go past Pluto. If we could



just get our hands on one of their faster-than-light drives, we could thumb our noses at the law." He sighed. "If wishes were horses..."

"Get ready to saddle up." There was a complacent smile on Flip's face as he tossed a long manila envelope on to the bed. "The thought of sitting in a Lunar prison cell for the next twenty years with nothing to look at but your fat face was just too much—so I went and did something about it."

Potsy opened the envelope and stared at its contents in bewilderment.

Flip grinned. "Return ticket, passport, identity card—the works. His ship takes off at ten and I've pumped enough DDT into him to keep him under for another six hours. When Quang Dal comes to, he's going to be an unhappy little Centaurian—broke, stranded, and friendless. Do you begin to get the picture?"

Potsy looked up at his partner with open admiration. "Not friendless. He's got us."

WHEN Quang Dal's six legs had recovered sufficient strength to carry him down the corridors in a tottering crawl, the first thing he did was to go to the police.

"Get outta here before I squash ya," growled the desk sergeant. "If we're such ignorant bums we

ain't good enough to be let in your Galactic Union, we sure ain't smart enough to help you out when you get into a jam."

"But, sir," protested Quang Dal, "I am just poor private Centaurian citizen who have nothing to do with admission standards whatsoever. Is not to be despairing for that, however. Has not Grand Council given fine promise that admission shall be accompaniment of attainment of minimumnal socialization percentile?"

"Scram," said the desk sergeant. "I ain't paid to get lectured by cockroaches."

Quang Dal drew himself up with dignity. "Is, one, inaccurate statement—terrestrial cockroach is not sapient being. Is, two, obviously hostile manifestation. Is through politeness and well wishing comes minimumnal socialization, not harsh speaking. In Cosmos, all entities are siblings. Translation: brothers and/or sisters."

With a quick wobble to the left, he avoided the descending boot and scuttled toward the door.

"I love you," he said ceremoniously, but earnestly. "Is well wishing with a vengeance."

At the Bureau of Extraterrestrial Affairs, he received a politer reception, but little in the way of help.

"Terribly sorry, old man," said the Third Assistant. "Wouldn't have had it happen for all the worlds. Don't know quite what I can do about it, though, now that your ship's gone. It was the first one in twenty years and there's no telling when the next one will stop by. It is rather shameful the way the rest of the Galaxy tends to avoid us, you know. I mean, after all, if you chaps would let us in on the faster-than-light drive and a few things like that, we wouldn't be so embarrassingly provincial."

"Are explaining many times before," said Quang Dal patiently. "Is no such thing as faster-than-light drive. As your good man Einstein show you long time ago, is theoretical impossibility."

The Third Assistant sniffed his disbelief. "And how many months has it been since you left Alpha Centauri?"

"Three months between time, but is not workable for Solar peoples. Is only what you call a convenience."

The official maintained his professional calm, but there was a little edge to his voice.

"I take it, then, that you consider us too stupid to know how to use it?"

"Did not say," said Quang Dal. "Is only unachievement of minimum socialization. Are principles involved that might be

used for harm to other entities."

The Third Assistant glanced at his watch, rose from his desk, and ushered the little Centaurian to the door.

"You'll have to excuse me, old man: Tea time, you know. Sorry I can't offer you a lift home on one of our ships, but since we've never been able to do better than one-fifth light speed, I'm afraid that we'll just have to putter around inside our own solar system until you chaps decide we're socialized enough to be given the galactic drive. I'll make a personal note of your case, however, and when an extraterrestrial ship drops in, one of my successors will get in touch with you immediately."

Quang Dal's attempt to explain again that there was no such thing as a faster-than-light drive was cut short by the closing of the door in his face. Rearing up on his hind legs, he ran his voice tube through the keyhole and said politely, "Note, please — I love you."

HIS only friends in a strange and hostile world, Patsy and Flip, were waiting for him when he got back to the hotel.

"How did it go?"

"Is, as you say, without soap," said Quang Dal mournfully. "Is constant expectoration upon by unwell-wishers."

"Don't let it get you down, pal," comforted Potsy. "What do you expect from a bunch of bums with a low-grade socialization index?" He reached in his pocket, pulled out a bulging billfold, and peeled off several bills. "Here's a little ready cash. Just remember that no matter what happens, you've still got us."

Flip nodded his agreement. "What's ours is yours. It may be fifty years before another galactic ship stops by, and even then it may be going the wrong way, but we'll stand by you!"

"If fifty years, not too bad," said Quang Dal. "Is seventy-five, is too late, I think so maybe. Is now Ides of March. Would be most inconvenient to spouses-to-be if not returning by June. Is getting married then," he explained, "and sewing no good with only six."

"If you're saying what I think you're saying," Potsy said, sympathetically, "you're in a tough spot. If you've got to wait fifty years, it won't be much of a marriage."

"Yeah," agreed Flip. "I can just see the poor girls waiting for their lover to come home, hopefully setting a light in their windows each night, slowly losing hope as the years pass—growing lined and gray and bitter with the thoughts of what might have been."

"Is many misconceptions here," said Quang Dal. "In first place, is not year question, is month question. In second, is not females on Alpha Centauri same kind like Earth. Is seven sexes. I am aplan-ton, number four kind." He went into a detailed description of relations and permutations that left the two Earthmen confused.

"If this is what is meant by being socialized," said Potsy finally, "I don't see how Earth will ever make it."

"POTSY," Flip said, "if our friend has to be home by June to get married, we're going to see that he makes it. Like he's always saying, all entities are siblings under the epidermis."

"I'm all for it," said his partner, "but how?"

"We've got a ship, haven't we?"

"Yeah, but without the galactic drive, it would take him twenty years to get back and he's due in June."

"He can make it," said Flip confidently. "All he has to do is build one of those faster-than-light gadgets and install it in the ship. Then he could make it back in time."

"Is not faster than light," objected Quang Dal once more. "Is merely convenience. But if loan-ation of ship could be made, would be well-wishing with a vengeance and impressive sign of

attainment of minimumnal socialization."

THREE weeks later, the job was done.

"Is all fix and workable fine," said Quang Dal. "You come down and see me off in morning. Is needful to express final love and gratitude."

"Wouldn't miss it for the world," said Flip.

"I think I go make last-time checkup."

When he left, Potsy pulled off his shoes and stretched on the bed.

"Looks like we'll make it."

"Just in time, too," said Flip. "In case you've forgotten, we're due down at the Justice Department at noon tomorrow for sentencing." He shuddered. "Twenty years would have been a long time!"

"Not as long as forty," said Potsy. "I think I'll have a bottle sent up. I feel like celebrating."

"Excellent idea. Order up five women while you're at it. We owe it to our race to see if we can get onto this sevensing."

At eight sharp the next morning, the two were standing in the control room of their spaceship listening to Quang Dal's last grateful good-bys.

"It's nothing at all," said Flip. "We'd do the same for any friend. How about showing us around before you take off?"

Quang Dal thought for a moment and then quivered assent.

"Would be no real violation of Galactic Union order. Secret things are all behind panels."

The control room had been considerably altered. In place of the complicated banks of controls that had flanked the pilot's seat, there were two push buttons set in a simple black box.

"This one take care of nawigation," explained Quang Dal. "One push, I go home. Start, go, stop—whole thing automatical. Could not change course if wanted to."

"You don't have to tell us what the other one controls," said Potsy. "One push and WHOOSH, Alpha Centauri in June."

"Is not whoosh. Is putt-putt-putt. Wery convenient, though."

"Well, I guess we're ready," said Potsy. "Do you want to do the honors, Flip, or shall I?"

"Is not understanding," Quang Dal equivalently frowned.

"Didn't you tell him?" asked Flip.

"I thought he'd take it for granted. After all, somebody has to bring the ship back."

Quang Dal reared up on his back four legs in an agitated fashion.

"Accompaniment cannot be, sweet entities. Is not only Galactic Union law violation, but not possible for two-legged human peoples."

FLIP produced a large and vicious-looking gun.

"Anything bugs can do, we can do better. Get aft before I splatter you against the bulkhead!"

"Weapon-using is sign of low socialization," said Quang Dal with regret and pity.

"Are you talking or walking?" demanded Flip, sighting down the barrel of his gun.

"Is terrible thing you doing," warned the little Centaurian as he backed out of the control room. "You have no right to do this to selves."

Potsy walked over to the control box. He reached out to press the first button and then hesitated.

"What if something should happen?" he asked worriedly.

"Couldn't be worse than twenty years in a Lunar isolation cell," said Flip. "You can stay behind if you want to, but I'm getting out of here."

Potsy still hesitated. Finally he came back and sat down.

"You push it," he offered.

Flip snorted in disgust and tossed his gun over to his partner. "Go on back and lock our little friend up in the aft stateroom. If we let him run around loose, he might get into mischief. I'll take care of things up here."

When Potsy had left the compartment, Flip took a deep breath, walked over to the con-

trol box, and slowly pushed the first button. The results weren't spectacular. There was a hum of lifters as the ship rose slowly, and then, with a gentle push, they were off. Once out of the atmosphere, the ship pointed its nose toward Alpha Centauri and began to pick up speed.

Potsy came back into the control room and took a quick look out the side port to where the Moon hung like a great pock-marked balloon. The penal colony itself couldn't be seen, but Lunaport was visible as a small glittering splotch.

He gave a little shiver and turned away.

"Everything under control?"

"So far. Do you think I ought to hit the other stud?"

Potsy shook his head. "The galactic ships never seem to use their drives until they are far enough away to be out of detection range. There must be a reason for it. Maybe the gadget blows up if it's set off near a sun."

They waited two days before Flip pressed the second button. There was a low whine from beneath the deck and then a squeal of fright from Potsy as a nerve-scraping vibration ran through the ship. A strange mistiness covered everything, as though the matter of which the ship was composed were turning to noth-

ingness and then back again a thousand times a second.

With a final shudder, the ship returned to normal.

Potsy gave a sigh of relief and mopped his forehead. "Well, we're still in one piece. And I guess we're finally on our way."

"Go let Quang Dal out," said Flip. "If these controls are as completely automatic as he says, he can't do us any harm now."

Potsy came back five minutes later, alone.

"He's got his door locked from the inside. He says that he's going to take a little nap and we should wake him come June."

Flip shrugged. "If that's the way he wants it."

AS the weeks crawled slowly by, the two Earthmen found themselves growing more and more irritable.

"I think I'd almost prefer the Lunar prison colony," said Potsy.

"Oh, well," growled Flip, "we've only got two weeks left. I guess I can stand your ugly face that long."

Potsy gestured toward Alpha Centauri which glimmered palely directly ahead. "You'd think it would be getting bigger by now."

"It'll stay like that almost to the end," said Flip. "The way I got it figured, we're going so fast that most of the light shoots past before it has a chance to get in.

If you want to see the difference, go take a look through the rear 'scope. The Sun should be out of sight by now."

Potsy trotted obediently to the rear and took a look out through the aft telescope. A moment later, he returned and asked in a timid and somewhat frightened voice, "If the Sun's supposed to be so far away, how come I can still see most of the planets?"

"Huh? You can?" Flip looked nervous as Potsy nodded. "That lousy little bug must have given us cockeyed instructions, knowing the galactic drive is Greek to us."

"But why should he?"

"How do I know? Maybe he wants us to break our necks some way while he's safe in his cabin. Well, I'll break his if he doesn't give us the right dope!"

"Go easy," Potsy advised anxiously. "Try to con the information out of him first. Then let him have it if he won't talk."

After considerable pounding, they managed to wake Quang Dal. His voice tube poked out through the grille at the top of his locked door and he asked politely, "Is June already?"

"No," said Flip, "it's only the middle of May. Potsy and I are sorry to have to wake you up, but something seems to have gone wrong with the drive. Would your mind coming out and fixing it?"

"Is nothing wrong," replied Quang Dal. "Can hear with prop-
erness from here. Sound smooth."

"The planetary drive is on, all right, but the faster-than-light didn't cut in. After all this time, we're still only a stone's throw from Earth. We should be almost to Alpha Centauri by now."

THERE was silence within the stateroom for a minute. "Is unhappiness to say this," the little Centaurian said regretfully, "but 'as I explain past times, faster-than-light drive is theoretical impossibility. Galactic Union scientists work two, maybe three million years now. For all this time, nothing, except once in a while little convenience. Is still taking twenty years going Earth, Alpha Centauri, or vice-versa."

"Then how in hell do you expect to get home in three months?"

"Is three months *between* time, not three months *pass* time. Wery different things," said Quang Dal. "Between time is from little convenience I tell you before about. With it, can take trip maybe two hundred years and still not be away from family too long. Wery fine convenience."

"Two hundred years!" gasped Potsy.

"Is one other thing which you mistake for faster-than-light drive. Old galactic peoples like

Centaurians live thirty-five, maybe forty thousands Earth years. Would not be socialized to tell poor Earth two-legged standers they live and die same thing like I get up and go bed. Is not well-wishing to make other entities unhappy. Would not tell you this, only I think you unhappier if I do not explain. So sorry."

Flip stood rigid, his brain freezing as the cold and horrid truth began to seep in.

"Then the second button . . ."

"Is biggest convenience. Faster-than-light drive impossible, but not time travel. Push second button, whole ship come back nineteen years, nine months. Could make it exactly same time of same year we leave Earth when we reach Alpha Centauri, but I like better awoken at time of sewing, so I set controls for June."

His voice was drowsier.

"You will wake me in June, kindly? Until, I take small nap—only twenty years. Apologizing that you cannot do likewise."

Quang Dal's voice was almost inaudible as he withdrew his voice tube from the grille.

"Is wishing well with a vengeance," he said, too conditioned to politeness to let weariness excuse him from the ritual of farewell. "Note, please—I love you."

—THEODORE R. COGSWELL

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FORECAST

Theodore Sturgeon returns next month with **THE TOUCH OF YOUR HAND**, a long novelet that refuses to hold still long enough to be outguessed. Here's a hint for you to work on: Osser knew exactly what he wanted, why he wanted it, and how to get it—except that each one of his reasons was totally wrong!

FAR FROM THE WARMING SUN introduces R. D. Nicholson, who, being an Australian, is actually a bit closer to it than we are. Heat, however, is pretty much the central problem of the story—when a politician of the future is run out of office, he really has to travel to cool off. Out to the moons of Saturn, as a matter of fact. Except that that's where things first start to get hot!

The planet described in Charles Y. De Vet's **DELAYED ACTION** is just about the perfect place for a criminal to commit the perfect crime. There's one little flaw, though—he can never remember just what it was he had committed!

stamped

CAUTION

By RAYMOND Z. GALLUN

It's a funny thing, but most monsters seem to be of the opinion that it's men who are the monsters. You know, they have a point.

Illustrated by KOSSIM

TEN minutes after the crackup, somebody phoned for the Army. That meant us. The black smoke of the fire, and the oily residues, which were later analyzed, proved the presence of a probable petroleum derivative. The oil was heavily tainted with radioactivity. Most likely it was fuel from the odd, conchlike reaction-motors, the exact principles of which died, as far as we were concerned, with the crash.





The craft was mainly of aluminum, magnesium and a kind of stainless steel, proving that, confronted with problems similar to ones we had encountered, aliens might solve them in similar ways. From the crumpled-up wreckage which we dug out of that Missouri hillside, Klein even noticed a familiar method of making girders and braces lighter. Circular holes were punched out of them at spaced intervals.

I kept hunting conviction by telling myself that, for the first time in all remembered history, we were peeking behind the veil of another planet. This should be the beginning of a new era, one of immensely widened horizons, and of high romance—but with a dark side, too. The sky was no longer a limit. There were things beyond it that would have to be reckoned with. And how does unknown meet unknown? Suppose one has no hand to shake?

The mass of that wreck reeked like a hot cinder-pile and a burning garbage dump combined. It oozed blackened goo. There were crushed pieces of calcined material that looked like cuttlebone. The thin plates of charred stuff might almost have been pressed cardboard. Foot-long tubes of thin, tin-coated iron contained combined chemicals identifiable as proteins, carbohydrates and fats. Food, we decided.

NATURALLY, we figured that here was a wonderful clue to the plant and animal life of another world. Take a can of ordinary beef goulash; you can see the fibrous muscle and fat structure of the meat, and the cellular components of the vegetables. And here it was true, too, to a lesser degree. There were thin flakes and small, segmented cylinders which must have been parts of plants. But most was a homogeneous mush like gelatin.

Evidently there had been three occupants of the craft. But the crash and the fire had almost destroyed their forms. Craig, our biologist, made careful slides of the remains, tagging this as horny epidermis, this as nerve or brain tissue, this as skeletal substance, and this as muscle from a tactile member—the original had been as thin as spaghetti, and dark-blooded.

Under the microscope, muscle cells proved to be very long and thin. Nerve cells were large and extremely complex. Yet you could say that Nature, starting from scratch in another place, and working through other and perhaps more numerous millions of years, had arrived at somewhat the same results as it had achieved on Earth.

I wonder how an other-world entity, ignorant of humans, would explain a shaving-kit or a lipstick.

Probably for like reasons, much of the stuff mashed into that wreck had to remain incomprehensible to us. Wrenches and screwdrivers, however, we could make sense of, even though the grips of those tools were not hand-grips. We saw screws and bolts, too. One device we found had been a simple crystal diaphragm with metal details—a radio. There were also queer rifles. Lord knows how many people have wondered what the extraterrestrial equivalents of common human devices would look like. Well, here were some answers.

A few of the instruments even had dials with pointers. And the numeral *I* used on them was a vertical bar, almost like our own. But zero was a plus sign. And they counted by twelves, not tens.

But all these parallels with our own culture seemed canceled by the fact that, even when this ship was in its original undamaged state, no man could have gotten inside it. The difficulty was less a matter of human size than of shape and physical behavior. The craft seemed to have been circular, with compartmentation in spiral form, like a chambered nautilus.

THIS complete divergence from things we knew sent frost imps racing up and down my spine.

And it prompted Blaine to say: "I suppose that emotions, drives, and purposes among off-Earth intelligences must be utterly inconceivable to us."

We were assembled in the big trailer that had been brought out for us to live in, while we made a preliminary survey of the wreck.

"Only about halfway, Blaine," Miller answered. "Granting that the life-chemistry of those intelligences is the same as ours—the need for food creates the drive of hunger. Awareness of death is balanced by the urge to avoid it. There you have fear and combativeness. And is it so hard to tack on the drives of curiosity, invention, and ambition, especially when you know that these beings made a spaceship? Cast an intelligence in any outward form, anywhere, it ought to come out much the same. Still, there are bound to be wide differences of detail—with wide variations of viewpoint. They could be horrible to us. And most likely it's mutual."

I felt that Miller was right. The duplication of a human race on other worlds by another chain of evolution was highly improbable. And to suppose that we might get along with other entities on a human basis seemed pitifully naive.

With all our scientific thoroughness, when it came to examining, photographing and re-

cording everything in the wreck, there was no better evidence of the clumsy way we were investigating unknown things than the fact that at first we neglected our supreme find almost entirely.

It was a round lump of dried sed mud, the size of a soft baseball. When Craig finally did get around to X-raying it, indications of a less dense interior and feathery markings suggesting a soft bone structure showed up on the plate. Not entirely sure that it was the right thing to do, he opened the shell carefully.

Think of an artichoke . . . but not a vegetable. Dusky pink, with thin, translucent mouth-flaps moving feebly. The blood in the tiny arteries was very red—rich in hemoglobin, for a rare atmosphere.

As a youngster, I had once opened a chicken egg, when it was ten days short of hatching. The memory came back now.

"It looks like a growing embryo of some kind," Klein stated.

"Close the lump again, Craig," Miller ordered softly.

The biologist obeyed.

"A highly intelligent race of beings wouldn't encase their developing young in mud, would they?" Klein almost whispered.

"You're judging by a human esthetic standard," Craig offered. "Actually, mud can be as sterile as the cleanest surgical gauze."

THE discussion was developing unspoken and shadowy ramifications. The thing in the dusty red lump—whether the young of a dominant species, or merely a lower animal—had been born, hatched, started in life probably during the weeks or months of a vast space journey. Nobody would know anything about its true nature until, and if, it manifested itself. And we had no idea of what that manifestation might be. The creature might emerge an infant or an adult. Friendly or malevolent. Or even deadly.

Blaine shrugged. Something scared and half-savage showed in his face. "What'll we do with the thing?" he asked. "Keep it safe and see what happens. Yet it might be best to get rid of it fast—with chloroform, cyanide or the back of a shovel."

Miller's smile was very gentle. "Could be you're right, Blaine."

I'd never known Miller to pull rank on any of the bunch. Only deliberate thought would remind us that he was a colonel. But he wasn't really a military man; he was a scientist whom the Army had called in to keep a finger on a possibility that they had long known might be realized. Yes—space travel. And Miller was the right guy for the job. He had the dream even in the wrinkles around his deep-set gray eyes.

Blaine wasn't the right guy. He

was a fine technician, good at machinery, radar — anything of the sort. And a nice fellow. Maybe he'd just blown off steam—uncertainty, tension. I knew that no paper relating to him would be marked, "Psychologically unsuited for task in hand." But I knew just as surely that he would be quietly transferred. In a big thing like this, Miller would surround himself only with men who saw things his way.

That night we moved everything to our labs on the outskirts of St. Louis. Every particle of that extraterrestrial wreck had been packed and crated with utmost care. Klein and Craig went to work to build a special refuge for that mud hump and what was in it. They were top men. But I had got tied up with Miller more or less by chance, and I figured I'd be replaced by an expert. I can say that I was a college man, but that's nothing.

I guess you can't give up participation in high romance without some regret. Yet I wasn't too sorry. I liked things the way they'd always been. My beer. My Saturday night dates with Alice. On the job, the atmosphere was getting a bit too rich and futuristic.

LATER that evening, Miller drew me aside. "You've handled carrier pigeons and

you've trained dogs, Nolan," he said. "You were good at both."

"Here I go, back to the farmyard."

"In a way. But you expand your operations, Nolan. You specialize as nurse for a piece of off-the-Earth animal life."

"Look, Miller," I pointed out. "Ten thousand professors are a million times better qualified, and rarin' to go."

"They're liable to *think* they're well qualified, when no man could be—yet. That's bad, Nolan. The one who does it has to be humble enough to be wary—ready for whatever *might* happen. I think a knack with animals might help. That's the best I can do, Nolan."

"Thanks, Miller." I felt proud—and a little like a damn fool.

"I haven't finished talking yet," Miller said. "We know that real contact between our kind and the inhabitants of another world can't be far off. Either they'll send another ship or we'll build one on Earth. I like the idea, Nolan, but it also scares the hell out of me. Men have had plenty of trouble with other ethnic groups of their own species, through prejudice, misunderstanding, honest suspicion. How will it be at the first critical meeting of two kinds of things that will look like hallucinations to each other? I suspect an awful and inevitable feeling of separateness that nothing can

bridge—except maybe an impulse to do murder.

"It could be a real menace. But it doesn't have to be. So we've got to find out what we're up against, if we can. We've got to prepare and scheme. Otherwise, even if intentions on that other world are okay, there's liable to be an incident at that first meeting that can spoil a contact across space for all time, and make interplanetary travel not the success it ought to be, but a constant danger. So do you see our main objective, Nolan?"

I told Miller that I understood.

That same night, Klein and Craig put the lump of mud in a small glass case from which two-thirds of the air had been exhausted. The remainder was kept dehydrated and chilled. It was guess work, backed up by evidence: The rusty red of that mud; the high hemoglobin content of the alien blood we had seen; the dead-air cells—resistant to cold—in the shreds of rough skin that we had examined. And then there was the fair proximity of Mars and Earth in their orbits at the time.

My job didn't really begin till the following evening, when Craig and Klein had completed a much larger glass cage, to which my outlandish—or, rather, outworldish—ward was transferred. Miller

provided me with a wire-braced, airtight costume and oxygen helmet, the kind fliers use at extreme altitudes. Okay, call it a space-suit. He also gave me a small tear-gas pistol, an automatic, and a knife.

All there was to pit such armament against was a seemingly helpless lump of protoplasm, two inches in diameter. Still, here was an illustration of how cautiously you are prompted to treat so unknown a quantity. You are unable to gauge its powers, or lack of them, for you have nothing on which to base a judgment.

I became like a monk—my pressure armor was my robe; the chilly semi-vacuum inside that glass cage, my cell. Nights out with Alice were going to be far between.

ON the third evening, that lump of mud, resting in dried-out soil similar to itself, split along the line where Craig had originally cut it. Out onto the cage floor crept what the records designated as *E.T.L.* — Extra - Terrestrial - Life. It was finished with the mud shell that had enabled it to survive a crash and fire.

Craig, Klein, Miller and a lot of news reporters stared into the glass cage from outside. There was nothing for me to do just then except watch that tiny monster, and try to read, in its every

clumsy, dragging movement, some fragmentary unveiling of many riddles.

Although it might have shrunk a bit since I had last seen it, it looked more complete. The dusky pink of its wrinkled integument was darker. It had dozens of short tendrils, hardly thicker than horsehair, with which it pulled itself along. It had lost some leaflike pieces of skin. Laterally, two eyes gleamed, clear and slit-pupiled. Its jaws, hinged on a horizontal plane, opened and closed between fleshy flaps. Through the thin plastic of my oxygen helmet, I heard a querulous "chip-chip-chip," which reminded me of the squeaking of an infant bat.

The E.T.L. crept in a small looping course on the cage floor, back to one half of the mud shell that had encased it. It tried to mount this, perhaps to gain a vantage point for better observation. But it fell and turned over. Its ventral surface was ceilingward; its tendrils writhed furiously as it tried to right itself. I thought of a horseshoe crab, stranded on its back and kicking helplessly. But this thing's form and movement were even more alien.

After a moment, I followed an impulse which was part duty to my job and part pity. I tipped the little horror back on its bottom,

glad that there was a glove between me and it. Then I did the same thing I would do with a pet puppy or kitten. I set a dish of food—chemically prepared to duplicate the contents of the tubes we had found in the wreck—right down in front of the E.T.L.

It fumbled at the stuff and, possibly because of a gravity two-and-a-half times as great as it was made for, it almost got itself stuck in the mess. But it freed itself. Its mouth-flaps began to make lapping movements as it sucked the nourishment.

I felt prematurely relieved. This was no potentially dominant wizard in a strange body, I told myself. This was pure animal.

Over my helmet radiophone—there was a mike outside the cage, so they could communicate with me when I was inside—I heard Miller say to the reporters:

"The feeding instinct. They've got it, too. Now we know for sure . . ."

I THINK that the E.T.L. had colic from that first meal, though, like any half-smart puppy trainer, I tried not to let it eat too much. It writhed for a while, as if in pain. And I was on pins. How was I supposed to know just what was best to feed the thing, so it would survive? Everything was guesswork, vary-

ing formulas cautiously, groping. And it wasn't only the food. There was the searching for the temperature, the air-pressure and the degree of dryness at which the E.T.L. seemed most comfortable. And there was also the fiddling around with light-composition and intensities, variable in the sun lamps, to find what seemed best.

• We seemed to have figured things out right—or else the monster was just rugged. It shed several skins, thrived and grew active. Its size increased steadily. And other things began to grow in that cage. Odd, hard-shelled, bluish-green weeds; lichenous patches, dry as dust; invisible, un-Earthly bacteria—all were harmless, possibly even beneficial, to my charge.

How did all this stuff come into being? Miller and Craig had examined the dried clay of the E.T.L.'s discarded casing with microscopes. They scraped dust from every fragment of the wreck that hadn't been blasted too much with fire, and made cultures. They were looking for spores and seeds and microbes. And it wasn't long before they had classified quite a list of other-world biological forms. The most common of these they transplanted into the cage.

Often I even slept inside the cage, clad in my armor. That's

devotion to a purpose for you. In a way, it was like living on a little piece of Mars. Often enough I was bored stiff.

But plenty did happen. From the start Etl—we began calling the thing that—showed an almost electrically intense curiosity for everything. Some of the habits of its kind were written in its instincts. It basked in strong light, but it liked dark corners, too. At night—when we turned the sun lamps off, that is—it would bury itself in the dusty soil. Protection against nocturnal cold might have been the reason for that.

WHEN he was a month and two days out of his clay shell, Etl tried to rear up vertically on his tendrils. He kept toppling over. Maybe he was trying to "walk." But there were no bones in those tendrils and, of course, the strong Earth gravity defeated him.

Lots of times I tried to see what he could do. A real scientist would call this "making tests." I just called it fooling around. I made him climb a stool for his food. He seemed to make a careful survey first, eying each rung; then he drew himself up in one motion.

During one of my rare nights in town—to get a refresher from outlandish stuff in Alice's company—I bought some toys. When I

came back to relieve Craig, who had taken care of Etl during my absence, I said: "Etl, here's a rubber ball. Let's play."

He caught it on the second try, in those swift, dextrous tendrils. There was a savagery in the way he did it. I thought of a dog snapping a bumblebee out of the air. Yet my idea that Etl was just an animal had almost vanished by then.

I got into the habit of talking to him the way you do to a pup. Sort of crooning. "Good fella, Etl. Smart. You learn fast, don't you?"

Stuff like that. And I'd coax him to climb up the front of my spacesuit. There were fine, barb-like prongs along the length of his many tentacles; I could feel them pulling in the tough, rubberized fabric, like the claws of a climbing kitten. And he would make a kind of contented chirping that might have had affection in it.

But then there was the time when he bit me. I don't know the reason, unless it was that I had held onto his ball too long. He got my finger, through the glove, with his snaggy, chalk-hued mandibles, while he made a thin hissing noise.

Pretty soon my hand swelled up to twice its size, and I felt sick. Klein had to relieve me in the cage for a while. The bite

turned out to be mildly venomous. Before that, I'd had a rash on my arms. An allergy, probably; maybe some substance from those Martian plants had gotten inside my spacesuit and rubbed onto my skin. Who knows? Perhaps Earthly flesh can sense alien life, and reddens to fight it off. And there you have one of the potential disadvantages of contact with unknown worlds.

THAT poisoned bite was one thing. But Etl's show of rage was another—a sign of the mixed nature of all his kind, emerging a bit from the shadows of enigma. Here revealed was the emotion on which things like murder are based. These creatures had it, just as we did. Maybe it's necessary for any kind of thing that can progress upward from nothing. Still, people did not find it reassuring when they heard about it on the newscast.

After that, popular opinion insisted that the cage be constantly surrounded by four manned machine-guns pointing inward. And tanks of cyanogen were so arranged that the poison gas could be sent gushing into the cage at any time.

Part of my mind felt these precautions were completely exaggerated. There is a certain, ever-present segment of any public, whose jittery imagination is a

constant fuse-cap for panic. Such cowardice angered me.

But the rest of me went along with Miller when he said: "We're in the dark, Nolan. For all we know, we might be up against very swift maturity and inherited memory. And we've got to go on testing Etl . . . with toys, psychological apparatus and tools and devices made by his own people. Suppose he 'remembers' skills from his ancestors, and can build dangerous new devices, or make old ones work again? If his kind are bent on being enemies, we'd better find it out as soon as possible, too, hadn't we? No, I don't truly expect any serious developments, Nolan. Still—just for insurance—eh?"

A YEAR passed without great mishap—unless I should mention that Alice and I got married. But it didn't spoil anything, and it raised my morale. We got a bungalow right on the lab grounds.

A lot had been accomplished, otherwise. Once I let Etl play with my gun, minus cartridges. He was avidly interested; but he paid no attention to the Hopalong cap pistol that I left in its place when I took the gun back. He figured out how to grip, simple Martian tools, threading his tactile members through the holes in their handles; but complicated

devices of the same origin seemed more of a puzzle to him than to the rest of us. So our inherited-memory idea faded out.

Etl liked to work with those slender tendrils of his. The dexterity and speed with which he soon learned to build many things with a construction set seemed to prove a race background of perhaps ages of such activities. I made a tower or a bridge, while he watched. Then he was ready to try it on his own, using screw-drivers that Klein had made with special grips.

Of course we tried dozens of intelligence tests on Etl, mostly of the puzzle variety, like fitting odd-shaped pieces of plastic together to form a sphere or a cube. He was hard to rate on any common human I.Q. scale. Even for an Earthian, an I.Q. rating is pretty much of a makeshift proposition. There are too many scattered factors that can't be touched.

With Etl, it was even tougher. But at the end of that first year Miller had him pegged at about 120, judging him on the same basis as a five-year-old child. This score scared people a lot, because it seemed to hint at a race of super-beings.

But Miller wasn't jumping to conclusions. He pointed out to the reporters that Etl's kind seemed to grow up very rapidly;

120 was only twenty points above the norm—not uncommon among Earth youngsters, especially those from more gifted families. Etl seemed to have sprung from corresponding parentage, he said, for it seemed clear that they had been of the kind that does big things. They'd made a pioneering voyage across space, hadn't they?

ETL could make chirps and squeaks and weird animal cries. Human speech, however, was beyond his vocal powers, though I knew that he could understand simple orders. He had a large tympanic membrane or "ear" on his ventral surface. Of course we wondered how his kind communicated with one another. The way he groped at my fingers with certain of his tentacles gave us a clue. There were tiny, nerve-like threads at their extremities. Seeing them prompted Miller to do something as brave as it was foolhardy.

He called in a surgeon and had a nerve in his arm bared. It must have hurt like the devil, but he let Etl clutch it with those thread-like members.

I was cockeyed enough to follow Miller's example and found out how much it really hurt. The idea was to establish a nerve channel, brain to brain, along which thoughts might pass. But nothing came through except a

vague and restless questioning, mixed with the pain of our experiment.

"It doesn't work with us, Nolan," Miller said regretfully. "Our nervous systems aren't hooked up right for this sort of stunt, or Etl's nerve cells are too different from ours."

So we had to fall back on simpler methods of communication with Etl. We tried teaching him sign language, but it didn't work too well, because tentacles aren't hands. Klein's inventive ability, plus some pointers from me about how Etl used his tentacles, finally solved the problem.

Klein made a cylindrical apparatus with a tonal buzzer, operated by electricity, at one end. It had dozens of stops and controls, their grips in the shape of tiny metal rings, along the sides of the cylinder.

First I had to learn a little about how to work that instrument with my big fingers. The trick was to mold the sounds of the buzzer, as human lips and tongue mold and shape tones of the vocal cords, so that they became syllables and words.

"Hell-oh-g-g-Et-t-l-l . . . Chee-s-s-ec-whad-d I-ee got-t?"

It was tougher for me than learning to play a saxophone is for a boy of ten. And the noises were almost as bad.

I turned the apparatus over to

Etl as soon as I could. Let him figure out how to use it. I'd just give him the words, the ideas. Of course he had to get educated, learn his cat, dog and rat, and his arithmetic, the same as a human kid, even if he was from another world. In a way, it was the law. You can't let a youngster, capable of learning, stay home from school.

And I was Etl's tutor. I thought what a crazy situation we had here; an entity from one planet being brought up on another, without any real knowledge of his own folks, and unable to be very close to those entities by whom he was being reared. It was strange and sad and a little comic.

For a while I thought I had a stammering parrot on my hands: "Hel-l-l-l-o . . . Hell-oh-g-o . . . N-n-ol-l-an-n-n . . . Hell-lo-oh."

Etl never lost that habit of repetition. But he made progress in his studies.

"One, two, t'ree, fo', five, six . . . One time one ee one. toot time one ee two . . ."

Picture it the way it was—I, clad in a spacesuit, crouching beside Etl in the cold, thin air inside that cage, tracing numbers and words in the dusty soil on the floor, while he read aloud with his voice tube or copied my words and figures with a sharp stick. Outside the transparent cage, the

television cameras would be watching. And I would think that maybe in a way Etl was like Tarzan, being raised by apes.

FOUR more years went by. I had offspring of my own. Petty and Ron. Good-looking, lovable brats. But Etl was my job—and maybe a little more than that.

At the end of two years, he stopped growing. He weighed fifty-two pounds and he was the ugliest-looking, elongated, gray-pink, leathery ovoid that you could imagine. But with his voice tube clutched in his tendrils, he could talk like a man.

He could take the finest watch apart, repair and clean it in jig-time—and this was just one skill among scores. Toward the end of the four years, a Professor Jonas was coming in regularly and getting into a spacesuit to give him lessons in physics, chemistry, college math, astronomy and biology. Etl was having his troubles with calculus.

And Etl could at least ape the outward aspects of the thoughts and feelings of men. There were things he said to me that were characteristic, though they came out of apparent sullenness that, for all I knew, had seeds of murder in it: "You're my pal, Nolan. Sort of my uncle. I won't say my father; you wouldn't like that."

Nice, embarrassing sentiment, on the surface. Maybe it was just cool mimicry—a keen mind adding up human ways from observation of me and my kids, and making up something that sounded the same, without being the same at all. Yet somehow I hoped that Etl was sincere.

Almost from the building of the cage, of course, we'd kept photographs and drawings of Mars inside for Etl to see.

Hundreds of times I had said to him things like: "It's a ninety-nine and ninety-nine hundredths per cent probability that your race lives on that world, Etl. Before the ship that brought you crashed on Earth, we weren't at all sure that it was inhabited, and it's still an awful mystery. I guess maybe you'll want to go there. Maybe you'll help us make contact and establish amicable relations with the inhabitants—if there's any way we can do that."

During those five years, no more ships came to Earth from space, as far as we knew. I guessed that the Martians understood how supremely hard it would be to make friendly contact between the peoples of two worlds that had always been separate. There was difference of form, and certainly difference of esthetic concepts. Of custom, nothing could be the same. We didn't have even an inkling of

what the Martian civilization would be like.

ONE thing happened during the third year of Etl's existence. And his presence on Earth was responsible. Enough serious interest in space travel was built up to overcome the human inertia that had counteracted the long-standing knowledge that such things were possible. A hydrogen-fusion reaction motor was built into a rocket, which was then hurled to the moon.

Miller went along, ostensibly to help establish the first Army experimental station there, but mostly to acquire the practical experience for a far longer leap.

In a way, I wished I could have gone, too; but, after all, the shadows in Etl's background were far more intriguing than the dead and airless craters and plains of the lunar surface.

Before Miller and the other moon-voyagers even returned, Detroit was busy forging, casting and machining the parts for a better, larger and much longer-range rocket, to be assembled in White Sands, New Mexico.

When Miller got back, he was too eager and busy to say much about the moon. For the next two and a half years, he was mostly out in White Sands.

But during the first of our now infrequent meetings, he said to

Craig and Klein and me: "When I go out to Mars, I'd like to keep my old bunch as crew. I need men I'm used to working with, those who understand the problems we're up against. I have a plan that makes sense. The trouble is, to join this expedition, a man has to be part damn-fool."

Klein chuckled. "I'll sell you some of mine."

I just nodded my way in. I'd never thought of backing out.

Craig grabbed Miller's hand and shook it.

Miller gave Etl a chance to say no. "You can stay on Earth if you want to, Etl."

But the creature said: "I have lived all my life with the idea of going, Miller. Thank you."

MILLER briefed us about his plan. Then he, Klein, Craig and I all took a lot of psych tests—trick questioning and so forth to reveal defects of conviction and control. But we were all pretty well indoctrinated and steady. Etl had taken so many tests already that, if there were any flaws still hidden in him, they would probably never be found.

Mars and Earth were approaching closer to each other again in their orbital positions. A month before takeoff time, Craig, Klein and I took Etl, in a small air-conditioned cage, to White Sands. The ship towered there,

silvery, already completed. We knew its structure and the function of its machinery intimately from study of its blueprints. But our acquaintance with it had to be actual, too. So we went over it again and again, under Miller's tutelage.

Miller wrote a last message, to be handed to the newscast boys after our departure:

"If, by Martian action, we fail to return, don't blame the Martians too quickly, because there is a difference and a doubt. Contact between worlds is worth more than the poison of a grudge . . ."

I said good-bye to Alice and the kids, who had come out to see me off. I felt pretty punk. Maybe I was a stinker, going off like that. But, on the other hand, that wasn't entirely the right way to look at things, because Patty's and Ron's faces fairly glowed with pride for their pa. The tough part, then, was for Alice, who knew what it was all about. Yet she looked proud, too. And she didn't go damp.

"If it weren't for the kids, I'd be trying to go along, Louie," she told me. "Take care of yourself."

She knew that a guy has to do what's in his heart. I think that the basic and initial motive of exploration is that richest of human commodities—high romance. The metallic ores and other commercial stuff that get involved

later are only cheap by-products. To make the dream of space travel a reality was one of our purposes. But to try to forestall the danger behind it was at least as important.

WE blasted off in a rush of fire that must have knocked down some self-operating television cameras. We endured the strangling thrust of acceleration, and then the weightlessness of just coasting on our built-up velocity. We saw the stars and the black sky of space. We saw the Earth dwindle away behind us.

But the journey itself, though it lasted ninety days, was no real adventure—comparatively speaking. There was nothing unpredictable in it. Space conditions were known. We even knew about the tension of nostalgia. But we understood, too, the mental attitudes that could lessen the strain. Crossing space to another world under the tremendous power of atomic fusion, and under the precise guidance of mathematics and piloting devices, reduces the process almost to a formula. If things go right, you get where you're going; if not, there isn't much you can do. Anyway, we had the feeling that the technical side of interplanetary travel was the simplest part.

There is a marking near the Martian equator shaped like the

funnel of a gigantic tornado. It is the red planet's most conspicuous feature and it includes probably the least arid territory of a cold, arid world. Syrtis Major, it is called. Astronomers had always supposed it to be an ancient seabottom. That was where our piloting devices were set to take us.

Over it, our retarding fore-jets blazed for the last time. Our retractable wings slid from their sockets and took hold of the thin atmosphere with a thump and a soft rustle. On great rubber-tired wheels, our ship—horizontal now, like a plane—landed in a broad valley that must have been cleared of boulders by Martian engineers countless ages before.

Our craft stopped rumbling. We peered from the windows of our cabin, saw the deep blue of the sky and the smaller but brilliant Sun. We saw little dusty whirlwinds, carved monoliths that were weathering away, strange blue-green vegetation, some of which we could recognize. To the east, a metal tower glistened. And a mile beyond it there was a tremendous flat structure. An expanse of glassy roof shone. What might have been a highway curved like a white ribbon into the distance.

The scene was quiet, beautiful and sad. You could feel that here maybe a hundred civilizations had risen, and had sunk back into

the dust. Mars was no older than the Earth; but it was smaller, had cooled faster and must have borne life sooner. Perhaps some of those earlier cultures had achieved space travel. But, if so, it had been forgotten until recent years. Very soon now its result would be tested. The meeting of alien entity with alien entity was at hand.

I looked at Etl, still in his air-conditioned cage. His stalked eyes had a glow and they swayed nervously. Here was the home-planet that he had never seen. Was he eager or frightened, or both?

His education and experience were Earthly. He knew no more of Mars than we did. Yet, now that he was here and probably at home, did difference of physical structure and emotion make him feel that the rest of us were enemies, forever too different for friendly contact? My hide began to pucker.

HIGH in the sky, some kind of aircraft glistened. On the distant turnpike there were the shining specks of vehicles that vanished from sight behind a ridge shaggy with vegetation.

Miller had a tight, nervous smile. "Remember, men," he said. "Passivity. Three men can't afford to get into a fight with a whole planet."

We put on spactsuits, which

we'd need if someone damaged our rocket. It had been known for years that Martian air was too thin and far too poor in oxygen for human lungs. Even Etl, in his cage, had an oxygen mask that Klein had made for him. We had provided him with this because the Martian atmosphere, drifting away through the ages, might be even leaner than the mixture we'd given Etl on Earth. That had been based on spectroscopic analyses at 40 to 60 million miles' distance, which isn't close enough for any certainty.

Now all we could do was wait and see what would happen. I know that some jerks, trying to make contact with the inhabitants of an unknown world, would just barge in and take over. Maybe they'd wave a few times and grin. If instead of being met like brothers, they were shot at, they'd be inclined to start shooting. If they got out alive, their hatred would be everlasting. We had more sense.

Yet passivity was a word that I didn't entirely like. It sounded spineless. The art of balancing naive trust exactly against hard cynicism, to try to produce something that makes a little sense, isn't always easy. Though we knew something of Martians, we didn't know nearly enough. Our plan might be wrong; we might turn out to be dead idiots in a

short time. Still, it was the best thing that we could think of.

The afternoon wore on. With the dropping temperature, a cold pearly haze began to form around the horizon. The landscape around us was too quiet. And there was plenty of vegetation at hand to provide cover. Maybe it had been a mistake to land here. But we couldn't see that an arid place would be any good either. We had needed to come to a region that was probably inhabited.

We saw a Martian only once—scampering across an open glade, holding himself high on his stiffened tentacles. Here, where the gravity was only thirty-eight percent of the terrestrial, that was possible. It lessened the eeriness a lot to know beforehand what a Martian looked like. He looked like Etl.

LATER, something pinged savagely against the flank of our rocket. So there were trigger-happy individuals here, too. But I remembered how, on Earth, Etl's cage had been surrounded by machine-guns and cyanogen tanks, rigged to kill him quickly if it became necessary. That hadn't been malice, only sensible precaution against the unpredictable. And wasn't our being surrounded by weapons here only the same thing, from another viewpoint? Yet it didn't feel

pleasant, sensible or not.

There were no more shots for half an hour. But our tension mounted with the waiting.

Finally Klein said through his helmet phone: "Maybe Etl ought to go out and scout around now."

Etl was naturally the only one of us who had much chance for success.

"Go only if you really want to, Etl," Miller said. "It could be dangerous even for you."

But Etl had already put on his oxygen mask. Air hissed into his cage from the greater pressure outside as he turned a valve. Then he unlatched the cage-door. He wouldn't be harmed by the brief exposure to atmosphere of Earth-density while he moved to our rocket's airlock. Now he was getting around high on his tendrils. Like a true Martian.

He left his specially built pistol behind, according to plan. We had weapons, but we didn't mean to use them unless everything went dead wrong.

Etl's tendrils touched the dusty surface of Mars. A minute later, he disappeared behind some scrub growths. Then, for ten minutes, the pendant silence was heavy. It was broken by the sound of a shot, coming back to us thinly through the rarefied air.

"Maybe they got him," Craig said anxiously.

Nobody answered. I thought

of an old story I'd read about a boy being brought up by wolves. His ways were so like an animal's that hunters had shot him. He had come back to civilization dead. Perhaps there was no other way.

By sundown, EtI had not returned. So three things seemed possible: He had been murdered. He had been captured. Or else he had deserted to his own kind. I began to wonder. What if we were complete fools? What if there were more than differences of body and background, plus the dread of newness, between Earthmen and Martians, preventing their friendship?

What if Martians were basically malevolent?

But speculation was useless now. We were committed to a line of action. We had to follow it through.

We ate a meager supper. The brief dusk changed to a night blazing with frigid stars. But the darkness on the ground remained until the jagged lump of light that was Phobos, the nearer moon, arose out of the west. Then we saw two shapes rushing toward our ship to find cover closer to it. As they hid themselves behind a clump of cactiform shrubs, I had only the memory of how I had seen them for a moment, their odd masks and accoutrements glinting, their supporting ten-

drils looking like tattered rags come alive in the dim moonlight.

WE'D turned the light out in our cabin, so we couldn't be seen through the windows. But now we heard soft, scraping sounds against the outer skin of our rocket. Probably they meant that the Martians were trying to get in. I began to sweat all over, because I knew what Miller meant to do. Here was a situation that we had visualized beforehand.

"We could shut them out till dawn, Miller," I whispered hoarsely. "We'd all feel better if the meeting took place in daylight. And there'd be less chance of things going wrong."

But Miller said, "We can't tell what they'd be doing in the dark meanwhile, Nolan. Maybe fixing to blow us up. So we'd better get this thing over with now."

I knew he was right. Active resistance to the Martians could never save us, if they intended to destroy us. We might have taken the rocket off the ground like a plane, seeking safety in the upper air for a while, if we could get it launched that way from the rough terrain. But using our jets might kill some of the Martians just outside. They could interpret it as a hostile act.

We didn't matter much, except to ourselves. And our primary

objective was to make friendly contact with the beings of this planet, without friction, if it could be done. If we failed, space travel might become a genuine menace to Earth.

At Miller's order, Craig turned on our cabin lights. Miller pressed the controls of our ship's air-lock. While its outer valve remained wide, the inner valve unsealed itself and swung slowly toward us. Our air whooshed out.

The opening of that inner valve meant we were letting horror in. We kept out of line of possible fire through the open door.

Our idea was to control our instinctive reactions to strangeness, to remain passive, giving the Martians a chance to get over their own probable terror of us by finding out that we meant no harm. Otherwise we might be murdering each other.

The long wait was agony. In spite of the dehumidifying unit of my spacesuit, I could feel the sweat from my body collecting in puddles in the bottoms of my boots. A dozen times there were soft rustles and scrapes at the air-lock; then sounds of hurried retreat.

But at last a mass of gray-pink tendrils intruded over the threshold. And we saw the stalked eyes, faintly luminous in the shadowy interior of the lock. Grotesquely up-ended on its tentacles, the

monster seemed to flow into the cabin. Over its mouth-palps was the cup of what must have been its oxygen mask.

What was clearly the muzzle of some kind of pistol, smoothly machined, was held ready by a mass of tendrils that suggested Gorgon hair. Behind the first monster was a second, similarly armed. Behind him was a third. After that I lost count, as the horde, impelled by fear to grab control in one savage rush, spilled into the cabin with a dry-leaf rustle.

ALL my instincts urged me to yank my automatic out of my belt and let go at that flood of horror. Yes, that was in me, although I'd been in intimate association with EtI for four years. Psychologists say that no will power could keep a man's reflexes from withdrawing his hand from a hot stove for very long. And going for my gun seemed almost a reflex action.

There was plenty of sound logic to back up the urge to shoot. In the presence of the unfathomable, how could you replace the tried defenses of instinct with intellectual ideas of good will?

On the other hand, to shoot now would be suicide and ruin our hopes, besides. So maybe there'd have to be human sacrifices to faith between the planets.



If we succeeded in following the plan, our faith would be proven either right or wrong. If we didn't act passively, the failure would be partly our fault. In any case, if we didn't get back to Earth, hatred and fear of the Martians would inevitably arise there, whether it had been the Martians' fault or ours. The message that Miller had left for newscast might only give people the self-righteous attitude that Earthly intentions had been good. If another expedition ever came to Mars, it might shoot any inhabitants on sight, and maybe get wiped out itself.

Still, how could we know that the Martians weren't preparing the kind of invasion of Earth that has been imagined so often? It was a corny notion, but the basis for it remained sound. Mars was a dying world. Couldn't the Martians still want a new planet to move to?

All these old thoughts popped back into my head during that very bad moment. And if I was almost going for my pistol, how much worse was it for Craig, Klein and Miller, who hadn't been as friendly with Etl as I had been? Maybe we should have put our weapons out of our own reach, in preparation for this incident. Then there would have been no danger of our using them.

But any freedom of action was swiftly wrested from us. The

Martians rolled over us in a wave. Thousands of dark tendrils with fine, sawlike spines latched onto our bodies. I was glad that I wore a spacesuit, as much from the revulsion I felt at a direct contact as for the small protection it gave against injury.

I AM sure that there was panic behind that wild Martian rush. To get us pinned down and helpless quickly, they drove themselves in spite of their own fear of the horrid human forms. For did I feel a tremor in those tendrils, a tendency to recoil from me? I was trembling and sweating. Still, my impressions were vivid. Those monsters held us down as if they were Malay beaters holding down trapped pythons. Maybe they had known beforehand what men looked like—from previous, secret expeditions to Earth. Just as we had known about Martians from Etl. But it wouldn't have made any difference.

Or perhaps they weren't even aware that we were from the neighboring planet. But it would be obvious that we were from another world; nothing from their own planet could be so strange.

Our own reactions to the situation differed a little. Craig gasped curses through his helmet phones. Miller said, "Easy, men! Easy!" It was as if he were trying to

build up his own morale, too. I couldn't utter a sound.

It wasn't hard for our captors to recognize our weapons. We were disarmed. They carried us out into the night and around a hill. We were piled onto a flat metallic surface. A vehicle under us began to throb and move; you could have called it a truck. The nature of its mechanism was hinted at only by a small, frosty wisp of steam or vapor up front. Perhaps it came from a leak. The Martians continued to hold us down as savagely as ever. Now and then a pair of them would join the nerve-ends of tendrils, perhaps to converse. Others would chirp or hoot for no reason that I could understand.

The highway rolled away behind us, under the light of Phobos. Buildings passed, vague as buildings along a road usually are at night. It was the same with the clumps of vegetation. Lights, which might have been electrical, flashed into my eyes and passed by. In a deep valley through which we moved in part of our short trip, a dense, stratified fog arose between the lights and me. I noticed with an odd detachment that the fog was composed of minute ice crystals, which glistened in the glow of the strange lamps. I tried to remember our course. I knew that it was generally east. Off in the night there were clang-

ings and hisses that might have been factory noises.

Once Miller asked, "Is everybody okay?"

Klein's and Craig's responses were gruff and unsteady in the phones.

"Sure . . ."

"More or less—if heart-failure doesn't get me."

"I guess our skins are still intact," I said.

We didn't talk after that.

AT last we entered a long, downward-slanting tunnel, full of soft luminescence that seemed to come out of the white-tiled walls themselves. My attention grew a little vague. It could be that my mind turned in on itself, like a turtle drawing in its head for protection. In that state of semiconsciousness, I experienced a phantasm. I imagined I was a helpless grub being dragged down into the depths of an ant-hill.

But such a grub belongs in an ant-hill a lot more than a man belonged where I was going. This became plainer when the large tunnel ended, and we were dragged and carried along winding burrows, never more than three feet in diameter. Mostly they were tiled, but often their walls were of bare rock or soil. Twice we passed through air-locks.

I couldn't describe too much of what I saw or the noises I heard in those warrens. In one place, incandescence glowed and wheels turned. In a great low-ceilinged chamber full of artificial sun-rays there was a garden with strange blooms. The architecture of the city was not altogether utilitarian and it was not unpleasing. I saw a lot more. But my mind was somewhat fuzzy, probably from shock and fatigue.

I know we traversed another chamber, where trays full of round lumps of soil were set in frames. A Martian nursery, no doubt.

Some minutes later, my companions and I were left in a small room, high enough so that we could stand erect in it. Here the Martians let go of us. We sprawled on the floor, faces down. We'd had a busy day. Our nerve-energy was burned out.

Hopelessness warped all of my thoughts. I must have slipped into the coma of exhaustion. I had jangled dreams about Alice and the kids and home, and almost imagined I was there.

Half awake again, I had a cursing spree, calling myself fifty kinds of a numbskull. Be passive before the people of other worlds! Reassure them! How did we ever think up that one? We'd been crazy. Why didn't we at least use our guns when we'd had the

chance? It wouldn't have made any difference to be killed right away.

Now we were sacrificial lambs on the altar of a featherbrained idea that the inhabitants of worlds that had always been separate from the beginning should become friends, learn to swap and to benefit from the diverse phases of each other's cultures. How could Martians who hatched out of lumps of mud be like humans at all?

Klein, Craig, Miller and I were alone in that room. There were crystal-glazed spy-windows in the walls. Perhaps we were still being observed.

WHILE I was sleeping, the exit had been sealed with a circular piece of glassy stuff. Near the floor there were vents through which air was being forced into the room. Hidden pumps, which must have been hastily rigged for our reception, throbbed steadily.

Miller, beside me, had removed his oxygen helmet. His grin was slightly warped as he said to me: "Well, Nolan, here's another parallel with what we've known before. We had to keep Etl alive in a cage. Now the same thing is being done to us."

This could be regarded as a service, a favor. Yet I was more inclined to feel that I was like something locked up in a zoo.

Maybe Etl's case was a little different. For the first thing he had known in life was his cage.

I removed my oxygen helmet, too, mainly to conserve its air-purifier unit, which I hoped I might need sometime soon—in an escape.

"Don't look so glum, Nolan," Miller told me. "Here we have just what we need, a chance to observe and learn and know the Martians better. And it's the same for them in relation to us. It's the best situation possible for both worlds."

I was thinking mostly—belatedly—of my wife and kids. Right then, Miller was a crackpot to me, a monomaniac, a guy whose philosophical viewpoint went way beyond the healthy norm. And I soon found that Craig and Klein agreed with me now. Something in our attitude had shifted.

I don't know how long we were in that sealed room. A week, perhaps. We couldn't see the daylight. Our watches had vanished along with our weapons. Sometimes there were sounds of much movement in the tunnels around us; sometimes little. But the variation was too irregular to indicate a change based on night and day.

Lots of things happened to us. The air we breathed had a chemical smell. And the Martians kept changing its composition and

density constantly—experimenting, no doubt. Now it would be oppressively heavy and humid; now it would be so dry and thin that we began to feel faint. They also varied the temperature, from below freezing to Earthly desert heat. And I suspected that at times there was a drug in the air.

Food was lowered to us in metal containers from a circular airlock in the ceiling. It was the same kind of gelatinous stuff that we had found in the wreck of the ship that had brought the infant Etl to Earth. We knew that it was nourishing. Its bland sweetness was not to our taste, but we had to eat.

Various apparatus was also lowered to us. There were odd mechanical puzzles that made me think how grotesquely Earthly Martian scientific attitudes were. And there was a little globe on a wire, the purpose of which we never figured out, though Miller got an electric shock from it.

I kept looking for Etl among the Martians at the spy-windows, hoping that he'd turn up again. I had noticed that Martians showed variations of appearance, like humans—longer or shorter eye-stalks, lighter or darker tendrils . . . I figured I'd recognize Etl. But I didn't see him.

We were none of us quite ourselves. Not even Miller, whose

scientific interest in the things around him sustained him even in captivity. Mine had worn out. And Klein and Craig were no better off. I was desperately homesick, and I felt a little ill, besides.

I managed to loosen the metal heel-plate from one of my boots, and with this, when I thought that no Martian was watching, I started to dig the gummy cement from around the circular glassy disc with which the main exit of our quarters had been sealed. Craig, Klein and I worked at it in brief and sporadic shifts. We didn't really hope that we could escape. It was just something to do.

"We're going to try to get to the ship, Miller, if it's still there," I whispered once. "Probably it won't work. Want to join up with the rest of us?"

I just didn't think of him as being in command now. And he seemed to agree, because he didn't protest against my high-handed way of talking. Also, he didn't argue against a projected rashness that could easily get us killed. Apparently he understood that our lives weren't worth much to us as things were.

He smiled a little. "I'll stick around, Nolan. If you do manage to get back to Earth, don't make the Martians sound too bad."

"I won't," I answered, troubled

by an odd sense of regret.

Loosening that exit disc proved in the end to be no special trick. Then we just waited for a lull in the activity in the tunnels around us. We all put on our oxygen helmets, Miller included, for the air-pressure here in our "cage" would drop as soon as the loosened disc was dislodged. We put our shoulders against it and pushed. It popped outward. Then the three of us, with Miller staying behind, scrambled on hands and knees through the tunnel that lay before us.

A crazy kind of luck seemed to be with us. For one thing, we didn't have to retrace our way along the complicated route by which we had been brought down to our prison. In a minute we reached a wide tunnel that slanted upward. A glassy rotary air-lock worked by a simple lever—for, of course, most of the city's air would be pressurized to some extent for the Martians—led into it.

The main passage wasn't exactly deserted, but we traversed it in leaps and bounds, taking advantage of the weak Martian gravity. Shapes scattered before us, chirping and squeaking.

We reached the surface quickly. It was frigid night. We stumbled away into it, taking cover under some lichenous bushes, while we



looked for the highway. It was there, plain to see, in the light of Phobos. We dashed on toward it, across what seemed to be a planted field. A white layer of ice-crystal mist flowed between and over those tough cold-endured growths. For a minute, just as two shots rang out behind us, we were concealed by it completely.

I thought to myself that, to the Martians, we were like escaped tigers or leopards—only worse. For a moment I felt that we had jumped from the frying pan into the fire. But, as we reached the highway, my spirits began to soar. Perhaps—only perhaps—I'd see my family again before too long. There was traffic on the road, trains of great soft-tired wagons, pulled by powered vehicles ahead. I wondered if, like on Earth, much freight was moved at night to avoid congestion.



"When I was a college kid, I used to hitch-hike sometimes," Craig remarked.

"I don't guess we had better try that here," Klein said. "What we can do is more of a hobo stunt."

We found the westerly direction we needed easily enough from the stars. The constellations naturally looked the same as they did at home. We hid behind some rustling leaves, dry as paper, and waited for the next truck train to pass. When one came, we used the agility which Martian gravity gave us and rushed for the tail-end wagon and scrambled aboard. There we hid ourselves under a kind of coarse-fibered tarpaulin.

Peering past boxes and bales, we kept cautious watch of the road. We saw strange placques, which might have served as highway signs. Again we saw buildings and passing lights.

We were dopes, of course, ever to think that we were going to get away with this. Our overwrought nerves had urged us to unreasoning rebellion, and we had yielded to them.

OUR last hope was punctured when at last we saw the flood-lights that bathed our ship. The taste on my tongue was suddenly bitter. There were roughly three things we could do now, and none of the choices was especially attractive.

We could go back where we had come from. We could try to keep concealed in the countryside, until we were finally hunted down, or until our helmet air-purifiers wore out and we smothered. Or we could proceed to our rocket, which was now surrounded by a horde of Martians. Whichever one we chose, it looked as if the end would be the same—death.

"I'm for going on to the ship," Klein said in a harsh whisper.

"The same with me," Craig agreed. "It's where we want to go. If they're going to kill or capture us, it might as well be there."

Suddenly, for no good reason, I thought of something. No special safeguards had been set up around that sealed room in the city.

Escape had been easy. What did that mean?

"Okay," I said. "Maybe you've both got the same hunch I just got. We walk very slowly toward our rocket. We get into the light as soon as possible. Does that sound right to you? We'd be going back to the plan. And, it could be, to common sense."

"All right," Klein answered.

"We'll give it a whirl," Craig agreed.

We jumped off that freight wagon at the proper moment and moved toward the rocket. Noth-

ing that we'd done on Mars—not even making our first acquaintance with the inhabitants—was as ticklish an act.

STEP after slow step, we approached the floodlighted area, keeping close together before that horde which still looked horrible to us. One thing in our favor was that the Martians here had probably been warned of our escape by whatever means of communication they used. And they could certainly guess that our first objective would be our ship. Hence they would not be startled into violence by our sudden appearance.

One of them fired a shot which passed over our heads. But we kept on going, making our movements as unafrightening as we could to counteract the dread of us that they must have still felt.

Panic and the instinctive fear of the strange were balanced in our minds against reason. We got to the nose of our ship, then to the open doors of its airlock. The horde kept moving back before us and we clambered inside. Martian eyes remained wary, but no more action was taken against us.

Our cabin had been ransacked. Most of the loose stuff had been removed . . . even my picture of Alice, and our two kids.

"Who cares about trifles?" I muttered. "Rap on wood, guys—

I think we've won. So have the local people."

"You're right," Klein breathed. "What other reason can there be for their not jumping us? Miller's passive strategy must've worked the first time. The story that we meant no harm must have gotten around. They don't want to make trouble, either. And who, with any sense does?"

I felt good—maybe too good. I wondered if the Martians felt the same eager fascination for the enigmas of space that we felt, in spite of the same fear of the nameless that we too could feel. My guess was that they did. Undoubtedly they also wanted interplanetary relations to be smooth. They could control their instinctive doubts to help attain this objective. If they coveted Earth's resources, it was still far away, and could defend itself. Besides, they were not built to live in comfort under the raw conditions of its strange environment. Commerce was the only answer.

Suddenly Mars was no longer a hostile region to me, out in the reaches of space. Again it was full of endless, intriguing mysteries. It was beautiful. And knowledge of that beauty and mystery had been won, in spite of some blundering. The scheme that we had practiced, and that Miller had stuck to, had paid off. It had broken down that first inevitable

barrier of alienness between Earthmen and Martians enough so that they now had a chance to start looking for the countless similarities between us.

A fraction of our food stores aboard the rocket had been taken, probably for analysis. But there was plenty more. We closed the airlock, repressurized the cabin from air-tanks, and cooked ourselves a meal. Then we slept in shifts, one of us always awake as guard.

At dawn, Miller hammered at a window. He'd been brought out from the city. We weren't too surprised by then.

ETL turned up at noon. He came in a kind of plane, which landed right beside our rocket, making quite a noise. I recognized him easily enough; I'd know those eye-stalks anywhere. Besides, as he came out of the plane, he was carrying the speech-tube that Klein had made for him.

We let him into the cabin. "Hello, gang," he said, manipulating the tube with his tendrils. "I see you passed your tests almost as well as I did on those weird things you were always making me take on Earth."

"So they were tests," I said.

"Sure. Otherwise, why do you think I didn't come to you before? They said you had to solve

your own problems."

"How did they treat you?" Miller wanted to know.

"Mostly my people were nice to me. They took me to a great desert city, far away. Sort of the capital of Mars. It's in an 'oasis' where a network of 'canals' join. The canals fit an old theory of your astronomers. They're ribbons of irrigated vegetation. But the water is piped underground. I spoke to my people in the way that you once thought I would, trying to convince them that you were okay. But I guess that you did most of the job yourselves."

"In spite of a lot of blunders, maybe we did, Ed," I replied dryly. "What are your plans? Going to stay here now? Or will you come back with us?"

I sensed that he would stay. It was natural. Maybe I even sensed a remoteness in him, a kind of withdrawal. Not unfriendly, but . . . we both knew it was the parting of the ways.

"It's best for what we're trying to accomplish, Nolan," he said. "I can tell my people about Earth; you can tell yours about Mars. Besides, I like it here. But I'll be back on Earth some time. Just so you'll come here again. Thanks to you guys for everything."

"I'd like to stay too, Nolan," Miller said, smiling. "If they'll have me. Under Ed's instructions, they might improve my quarters."

SO that much was settled. I felt a certain longing myself now. But I'm a family man, with home still in my blood. Klein and Craig weren't tied as I was, but they had a lot to hold them to Earth. Besides, somebody had to report back.

We were on Mars two days longer, though we didn't go any farther than back to the neighboring city. We took thousands of photographs. We were given samples of common Martian apparatus, pieces of jade that were covered with queer, beautiful carvings made millions of years before, bars of radioactive metal.

Earth was still near enough in its orbit to be reached without too much trouble. We jacked our rocket into a vertical position, from which an interplanetary

takeoff could best be made. The cabin, swinging on its universal joints, stayed level. Martians watched, interested, but still obviously not quite ready to cast aside their deeper suspicions. Yet, when we blasted clear, we knew that a ship of theirs, halfway around the planet, was doing the same and would follow us back to Earth. Ambassadors, of course, and commercial attachés.

I'd lost my picture of Alice, Patty and Ron to some local souvenir hunter. But I knew that I was going to see them . . .

The friendly contact between Earth and Mars can still be queered by somebody's silly blunder, of course. Human or Martian. You have to be careful. But a beginning has been made.

—RAYMOND Z. GALLUN

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